

# AMERICAN ARTISAN and Hardware Record

VOL. 85. No. 11. 620 SOUTH MICHIGAN AVENUE, CHICAGO, MARCH 17, 1923. \$2.00 Per Year.



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It does cost more—but it gives you a much better profit and gives your customers that satisfaction they expect.

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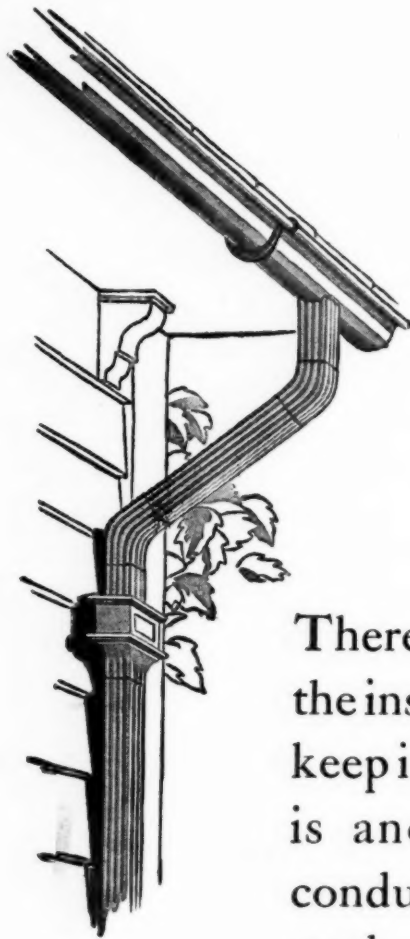
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Thoroughly Covers  
the Hardware, Stove,  
Sheet Metal, and  
Warm Air Heating and  
Ventilating Interests

# AMERICAN ARTISAN and Hardware Record

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## MELLON SAYS ALL OF 1923 WILL BE GOOD.

Nobody who has studied the mental and political characteristics of Secretary Mellon, who is the disbursing officer of the United States and incidentally one of the most prominent bankers in the Pittsburgh section, will place him in the class of those whom we regard as "progressives," nor would anyone be likely to class him an extraordinary optimist, so what he says about the present condition as well as about the prospects for the next year or two may be considered as somewhat conservative rather than unduly optimistic.

And this is what Mr. Mellon says:

He expects business generally to continue at its present volume, with an upward trend in some lines, for at least a year and, if there are no excesses in the way of disproportionately high prices and wages, for two years more.

When the country's limit is reached Mr. Mellon does not forecast a sudden cessation of production or trade, but rather a gradual easing up in the volume of business, which would permit of successful readjustments free from sharp reactions and other business vicissitudes.

According to his diagnosis of the present business situation the country is in a healthy condition, with ample credit available for the volume of business done, and no indications are apparent of unusual or serious speculative features manifesting themselves.

It was indicated as his view, however, that if money rates evidenced a tendency to advance too rapidly the effort might be made

to apply a higher Reserve rediscount rate as a break. Mr. Mellon believes that the Federal Reserve rate should be kept in harmony with conditions in the money market and the recent advance in the New York, Boston and San Francisco rate he considers as instancing this policy.

Although Mr. Mellon is confident of a year or two more of business expansion, he nevertheless feels that the growth cannot go on indefinitely, and that there is a definite limit to the country's labor and transportation capacity. However, he sees no extended labor shortage at present. But he does believe that the volume in some lines has reached very nearly the limit of growth, notably in steel, while in other lines there are prospects for very considerable further expansion.

Warning was given by him against excess which might halt the upward trend of the country's economic development and hope was expressed that there would be no repetition of undue pressure being brought to bear on the production of commodities.

It sometimes occurs, he reminds us, that where there is a demand for a given commodity, some business men looking ahead for their supplies, place orders with several concerns in the belief that all will not be filled, but that in this manner they will obtain the amount desired. This, he considers, creates a harmful pressure on a commodity, while too much of a rise in the price of commodities works to stop consumption—as happened in the Spring of 1920.



## Random Notes and Sketches.

By Sidney Arnold

While I believe in the "Freedom of the Press," to the extent that no one advertiser, nor any group of advertisers, should be allowed to dictate the editorial policy of a publication, it is only fair to the advertising patrons of any publication that its editorial and news policy should not be antagonistic to its advertisers, especially in view of the fact that without them the paper would not be likely to make any profit.

It is, therefore, with regret that I noticed in a recent issue of the *Chicago Tribune* an item on the front page which was headed, "Retailers' Profits on Potatoes Is 400 Per Cent," the story going on to say that a Michigan farmer had inserted a slip of paper in a potato stating that he received 24 cents a bushel, and that a Virginia housewife had found this potato among a peck for which she paid 40 cents.

The "headline writer" certainly did not only not state the facts, but misstated them in a way to tend to create mistrust in the retailer and to lead people to believe that this particular retailer was a leader among that undesirable class of people whom we class as "profiteers."

It not only was not a constructive piece of news, but was absolutely destructive—and so utterly untrue that the department head which allowed it to be printed ought to be fired, as a matter of justice to the advertising patrons of the *Chicago Tribune*.

\* \* \*

"Ability to carry a bluff is essential if you are inclined to take undue advantage of opportunities or of other persons," says Charlie Atwood, of the Milwaukee Corrugating Company, and he illustrates his statement with the following story:

An elderly actor with stately bearing and melodious voice went for a holiday to a place in northern England.

Fishing one day in a forbidden stream he was accosted by the keeper, who asked him by what right he dared to wield the rod and line in private grounds.

"By what right?" answered the melo-dramatic one. "By that great right the vast and towering mind has o'er instinct of the vulgar kind."

The keeper stared at him for a moment, then touched his cap and said: "Beg pardon, sir, I didn't know that."

\* \* \*

F. M. Farber, of the Marshalltown Manufacturing Company, is quite a dog lover and he tells all sorts of stories about them. Here is one of his latest:

Collies, as every one knows, are an intelligent breed of dogs, but only on their native heath are they in their element. There, influenced by the canny environment of the Scot, they are said to exemplify their masters' racial traits. A certain old Scotsman was in the habit of giving one of these intelligent beasts a penny with which to buy himself a bun. One evening the dog surprised his master by returning without his purchase. Thinking he might have lost his penny, the kindly Scot gave him another, but again the dog returned without the bun, so the owner sallied out to investigate. They reached the shop, where the dog jumped joyfully against a sign pointing to a tray of buns which read 1c each, four for 3c."

\* \* \*

"A letter of recommendation may read perfectly all right to the writer, but at the same time it may give just the opposite idea to what you intended it to do," said E. S. Gelatly, of Illinois Zinc Company, "as witness the following letter from a lady who had washed her imported French hand-made blouse with a well known soap flake:

"I have found it difficult to convince my friends that I have washed it at all."

\* \* \*

Charles Boardman, of the Aluminum Goods Manufacturing Company, told me the following story about a friend of his who was a widower and whose fiancée also had been married before.

They were sending out invitations to their wedding and the groom-elect wrote across the bottom of the invitation sent to a particular friend:

"Be sure to come; this is no amateur performance."

\* \* \*

"Tell the truth always," says Tony Howe, of the J. M. & L. A. Osborn Company, "Even if it hurts, but don't do it in the way Tommy did."

"Thomas," said Mr. Smith as he gazed into his son's eyes with a soul-searching look, "have you touched any of the plums I put in the cupboard?"

"Father," said Tommy, "I cannot tell a lie. I have not touched one!"

Mr. Smith eyed him wrathfully as he plunged his hand into the pocket of his coat and drew out five incriminating stones.

"Then how is it," he asked, "that I found these plum stones in your bed-room, and there is only one plum left in the cupboard?"

"Father," said Thomas, as he silently but swiftly left the room and placed a chair in such a position that Mr. Smith would fall over it if he followed too quickly, "father, that is the one I did not touch!"

\* \* \*

Charlie Merritt, of the Forest City Foundry folks, says that he has heard a good many different excuses for not coming to work, but he thinks that this one takes the cake:

Casey: "Kelly wants me to tell ye he couldn't be down to work today as the missis is sick."

Foreman: "An' what's after bein' the trouble with her?"

Casey: "Ah, the poor girl. She broke two fingers wallop'in' Kelly."



# Facts of Warm Air Heating and Ventilating.

Reports of Progress in Warm Air Heater Research Work.  
Ventilating Factories, Theatres and Other Buildings.

*National Warm Air Heating and Ventilating Association Will Convene April 18 and 19 in Cleveland, Ohio.*

The National Warm Air Heating and Ventilating Association will hold its tenth annual convention at the Winton Hotel, Cleveland, Ohio, April 18th and 19th.

A number of interesting papers have been arranged for the business sessions and one of the other pleasant features will be the banquet on Wednesday evening, April 18th.

The following is quoted from the announcement sent out by the Executive Committee:

"As this meeting means much to our growing industry and the success and extension of our activities, it is our courteous and earnest request that every member be present, and that all manufacturers of warm air heaters or any accessory accept this announcement as a cordial invitation to attend.

"The program arranged relates to both Commercial and Engineering phases and will be of vital interest. Our two-day session will afford ample time for the consideration of all subjects.

"A special and informal banquet will be served promptly at six p. m., April 18th, in the Hotel Winton, to which all are invited and expected. It will be a most agreeable occasion.

"Hotel reservations should be made in advance."

## **Wanted—A New Name for Front Rank Service Organ**

Six or seven years ago we had occasion several times to refer to and quote from a little house organ published by the manufacturers of Front Rank warm air furnaces.

The war caused this very well edited publication to be suspended, but now it has made its appearance again. The name is still in abey-

ance, and installers are requested to suggest the proper title.

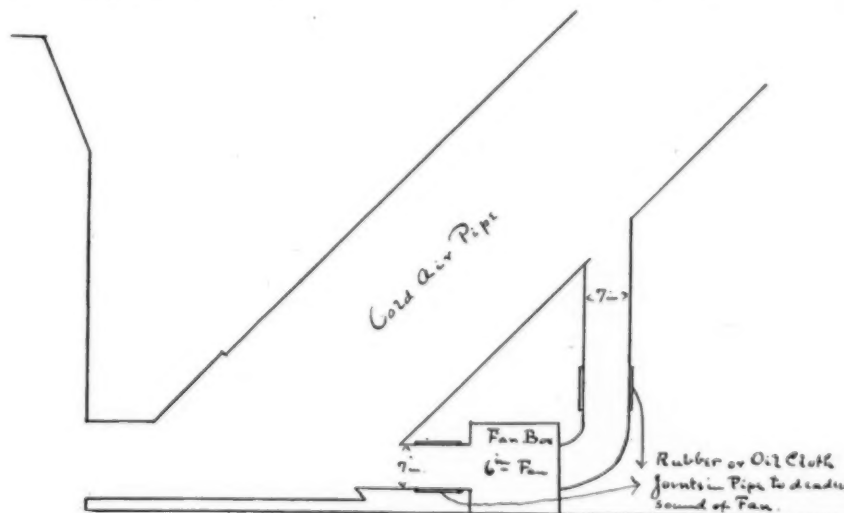
Incidentally, one of the interesting features of the first issue is a picture of the ground where the new plant of Haynes-Langenberg Manufacturing Company is to be—all studded with concrete pillars for the foundation. From what "E. B." tells us, it is going to be some plant.

## **Fan Makes Warm Air Furnace More Efficient.**

C. L. Epps, who sells Success warm air heaters in Van Wert, Ohio, is convinced that fans will cure most of the bad furnace installations. He writes as follows:

TO AMERICAN ARTISAN:

When I was in your office a short time ago you asked me to submit one of my plans. Well, here it is:



This is a fan job that I added to a good warm air job and made it a still better job and saves fuel:

I used a six-inch fan and coupled the switch with the draft chain so that when the thermostat opens draft on furnace the fan starts and cuts out when draft closes.

I installed one last week on a poor circulating job where there is no thermostat. This cuts on and off by a snap switch upstairs.

If you think this is worth passing on, all right.

Yours truly,

C. L. EPPS.

Van Wert, Ohio, March 1, 1923.

## **1923 Heating and Ventilating Guide Will Cover Many Subjects.**

The plans for the "1923 Guide" of the American Society of Heating and Ventilating Engineers call for a much wider scope than the 1922 edition, the purpose being to promote the use of modern heating and ventilating equipment.

Among the subjects to be covered are the following:

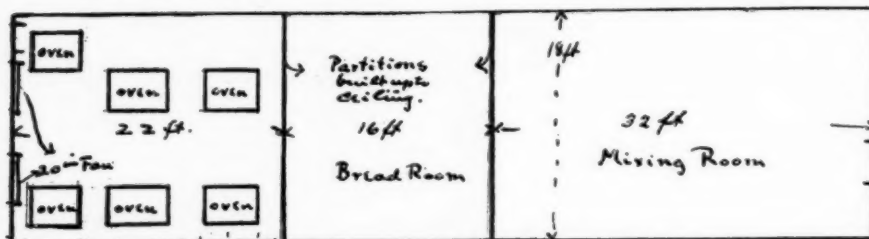
- Copper and Brass Pipe.
- Exhaust and Collecting Systems.
- Fan Ventilation.
- Gas Heating.
- Hot Water Heating.

- Insulation.
- Lead Lined Pipe.
- Pump Data.
- Refrigeration.
- Refrigeration Applied to Air Conditioning.
- Steam Heating.
- Steel Pipe.
- Temperature Regulation.
- Ventilators.
- Warm Air Furnace.
- Wrought Iron Pipe.

### Requests Help in Providing Ventilation for Oven Room in Bakeshop.

Here is a job for you ventilating men. Your friend Miller in Fort Wayne, Indiana, writes as follows: To AMERICAN ARTISAN:

I ask your advice on how to properly ventilate the oven room, as shown in sketch. The temperature in this room reaches 120 degrees in the summer months. We now have ventilating pipes in, over all ovens,



with a 20" fan on and also a 20" fan in other window as shown.

What I would like to know is, how I am going to correct this trouble. We thought by placing a pipe from rear of building into oven room and placing a fan there to suck the fresh air in, that might overcome the trouble. If you think so, please advise me as to size of pipe to be used and also fan. If this plan is no good, please advise me what to do.

This room is on the second floor and ceiling is 15' high. These people have spent quite a large sum of money trying to correct this trouble and don't care to spend very much more until we are sure that it will work successfully.

Hope I have covered all that is necessary for you, on plan as well as in writing. I am,

Very truly yours,

CARL MILLER.

Fort Wayne, Indiana,  
February 26, 1923.

### Brand Tells Foster That He Is Wrong.

On page 25 of our February 24th issue, H. A. Foster told of several interesting matters pertaining to the importance of proper-sized cold air returns.

In the following we publish a letter from L. A. Brand, which shows that all people are not of the same mind:

To AMERICAN ARTISAN:

In answer to the article by H. A. Foster in your issue of February 24, 1923, page 25, Mr. Foster does not work in harmony with the true circulation of warm and cold air. He assumes the warm air enters at register, rises to ceiling, crosses ceiling, goes to side wall, travels down that and crosses floor (still

every 10 square feet of exposed wall.

One square inch capacity for every 100 square feet of cubic foot contents.

It is acknowledged that the largest cooling factor are doors and windows. If you will take the cold air away from inside walls you pull this cold air across the floor and create a cold air zone and draft above floor. But if this cold air is taken through floor below window, you have no cold air zone or draft and warm air starts at floor line.

And again, Mr. Foster states he finds some one that takes 314 cubic inches pipe, 20 inches from two boxed joists, same being 2" X 8" joists = 16". I always figure joist space as he does; joists 2" X 8" are 16", equal to 110 cubic inches or 10 to 12" pipe; 2 space equals 220 or 16" pipe (not 20"); 3 space equals 18" pipe and 4 space 20". Cold air faces must have same capacity.

Never use a cold air shoe or elbow into furnace case that has opening above ash pit level.

Where a cold air collar is nailed directly to joist all joists should be beaded off if they cross collar opening, to allow full capacity.

As for W. W., on page 24, same issue, if your furnace is large enough to heat the job in cold weather and flue has a good pull a smoke damper is an absolute necessity both practically and financially. In case your furnace is too small and draft poor, a damper is a detriment. But under no case do I place smoke pipe damper between check and chimney. It should always be between check and furnace.

Riverside Hardware Company,

L. A. BRAND.

—, Iowa, February 26, 1923.

### The Only Case Where Salesman Is Not Necessary.

If you cannot interest the customer and hold his attention, you cannot make a sale unless he came intending to buy, and anybody can sell the customer who has already decided to buy.

warm) and enters cold air register.

It was this fake doctrine aided by moneyed propaganda that made the pipeless mushroom possible, but as quickly as it was exposed to the facts of cold floor and feet it collapsed like a burst toy balloon.

You and all of us furnace men know our entire practice is built on the fact that warm air rises above cold air. It rises and stays there till it cools and then gradually lowers as it cools. It does not circulate around a dead center. There are three factors about this air that must be taken into consideration.

First: Natural heat loss as represented by the cubical contents of room.

Second: Contact of the warm air with various exposed wall surfaces.

Third: Contact of this air with single glass (window, door), etc.

In the following proportions on a frame building:

Cubic feet contents ( ) X 1.

Enclosed wall square feet ( )

X 7.

Enclosed glass square feet ( )

X 75.

Our City Ordinance has a shorter method as follows:

Warm air capacity should be:

One square inch capacity for every square foot of glass or door.

One square inch capacity for

# Another Solution to Pipeless Furnace Problem Presented by George W. Turton.

*Nebraska Furnace Installer Bases His Suggestions on Doctrine of Circulation.*

TO EDITOR AMERICAN ARTISAN:

I was very much interested in the problem on heating a two-story building with a pipeless furnace as submitted by Mr. George W. Turton in the December 30th issue of AMERICAN ARTISAN. I note in concluding his letter Mr. Turton asks the following question: "Suppose a customer should give you his house floor plans like the following, and tell you that he wanted a pipeless furnace, what would you advise him? If you accepted, how would you make the installation?"

In reply to this question, I am inclosing a sketch or plan showing how I would undertake to heat this building with a pipeless furnace.

By referring to the plan you will note that I have placed the furnace as near in the center of the two rooms as well as as near to the chimney as possible.

To heat the kitchen and study I would place an oblong wall register over the doors and as close up to the ceiling as possible. The return air

from both these rooms I would take through base boards as shown, by using oblong wood faces in base board on each side of wall.

If there is a door in stairway in kitchen I would put in a wood face cold air return in bottom of door, or else cut about two inches off bottom of door. This completes the first floor plan.

"For the second floor plan, I would use ceiling ventilators of a make that can be opened and closed from lower floor. By again referring to plan you will note that I have placed these ceiling registers in a triangle, thus bringing the furnace register as near to the center of the three ceiling registers as possible, so as not to favor one ceiling face with more heat than the other.

To heat the corner bedroom and bathroom, I have proceeded the same as in the kitchen and the study, by placing an oblong wall register in wall close up to ceiling as possible, as shown in plan.

As the bathroom calls for 10 de-

grees more heat than the rest of rooms, you will note that I have placed a warm air grill over bathroom door, in addition to the grill in bathroom wall.

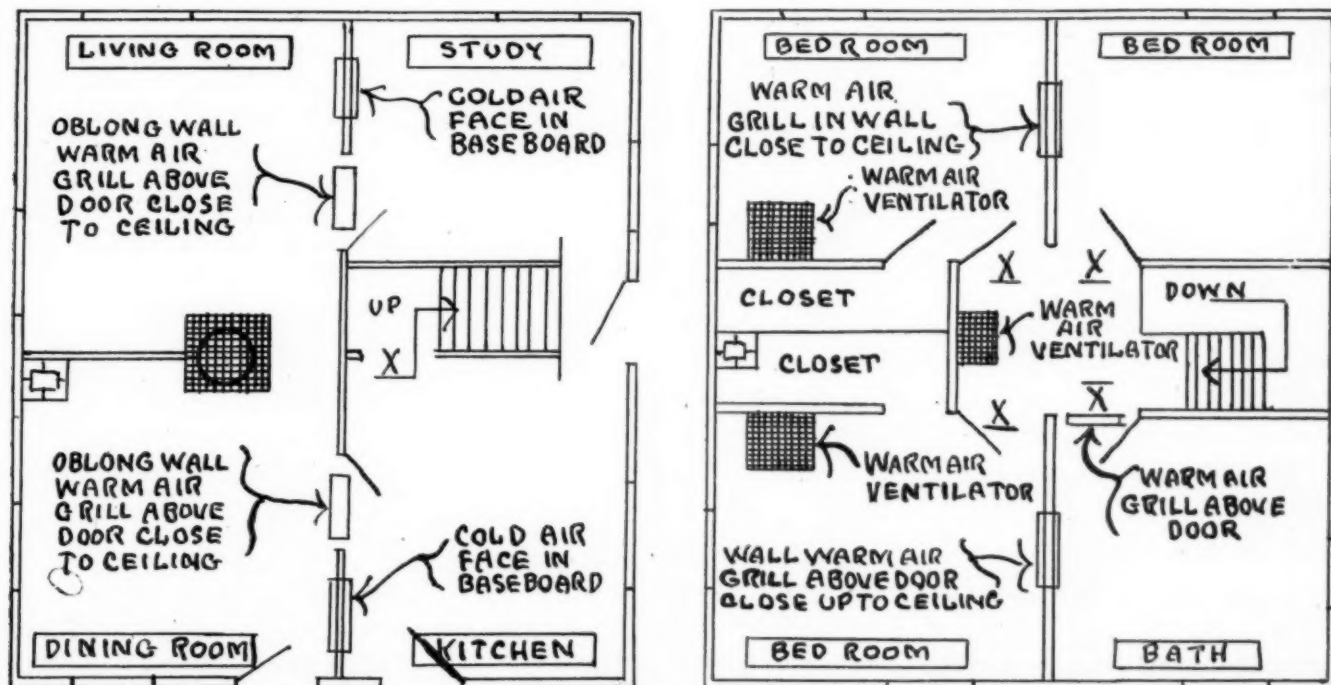
To get the return air from all upstairs rooms, I would either put in a cold air face in the bottom of each of the hall doors or cut off the bottom of each door at least 1½ inches or 2 inches. However, would consider a wood face in bottom of door about 4 inches wide would make the best looking job. The hall warm air floor register might be placed more in center of hall than shown in plan, but I have placed it as shown to avoid walking over it as much as possible.

• If the upper corner bedroom, XXX, should be a northwest room, more heat might be taken into this room by placing an open grill above door same as shown in bathroom.

I have not taken into consideration size of furnace, ceiling faces, grills, etc. These, of course, would have to be figured.

What I have tried to do is to show how I would undertake to heat this building with a pipeless job as I am no heating engineer nor even related to one.

My experience in the warm air heating line has been about 95%



ALL X - SHOW COLD AIR RETURN AT BOTTOM OF DOORS



in pipe jobs, hence my experience in pipeless work has been limited.

I do know, however, that circulation is one of the main points to keep in mind when installing a warm air furnace.

In conclusion, will say that I am submitting my plan on heating this building to Mr. Turton for his consideration and would be pleased to hear from him and to know just how far I would miss heating the building.

G. A. BYOR.

—, Nebraska, February 28, 1923.

### **Ransburg Shows How to Heat House Without Regular Basement by Means of Warm Air Furnace.**

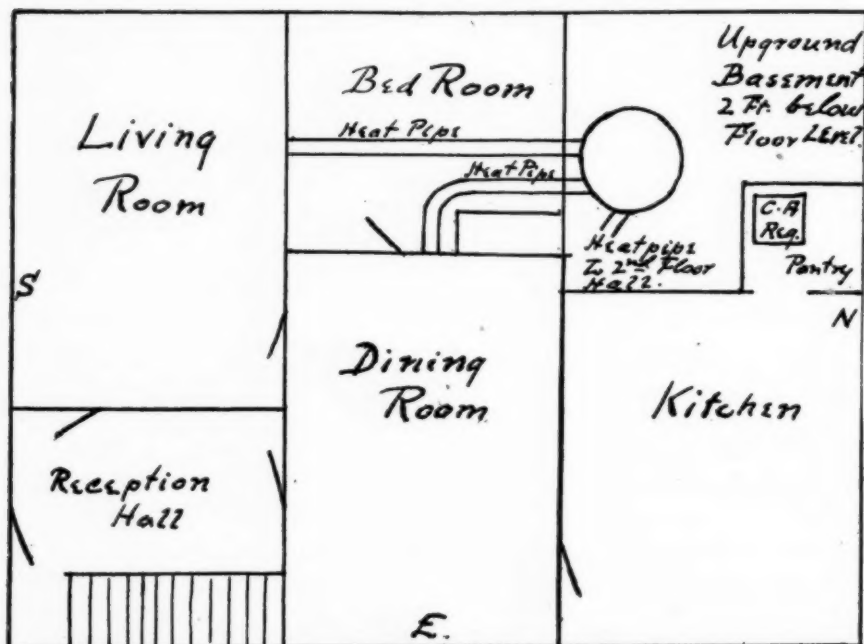
The following letter, together with tracing, has been received from M. R. Ransburg, one of the salesmen of the Majestic Company, manufacturers of Majestic Duplex

This is some task, unless you obtain some concessions from the owner as to appearance, especially in the room where exposed pipes must necessarily be run.

I did this in a house five years ago and am heating the place to the owner's entire satisfaction; but I had to get his permission to disfigure his first floor bedroom; that is, I ran two overhead pipes through this bedroom and connected one to the living room, the other to dining room. Registers were in the side wall, within a foot of the ceiling. I am enclosing a diagram of the house as heated.

I placed a large cold air register in the pantry, which would allow the circulation to enter room where furnace was located. The furnace was up on legs, similar to a room heater.

I had it fully understood with the



Sketch Showing Installation of Warm Air Furnace in House Without Regular Basement.

registers and warm air furnaces, in which he shows how he heated a basementless house with a warm air furnace:

TO AMERICAN ARTISAN:

I have just been reading your publication, which I do each week, and note Mr. H. Bitterlich of —, Colorado, asked how a furnace can heat a house without a basement.

owner that the doors must be left open, so cold air could go from the rooms to pantry where the provision was made for outlet.

I also ran a round stack to the second floor hall directly over the furnace, which gave the second floor rooms an abundance of heat.

Respectfully,

M. R. RANSBURG.

Pleasant Lake, March 3, 1923.

### **Illinois Sheet Metal Auxiliary Will Entertain Contractors at Decatur Convention.**

TO AMERICAN ARTISAN:

I would be very much pleased if you could give a little publicity article regarding the coming Convention of the Illinois Sheet Metal Contractors' Association, to be held at Decatur, April 4th and 5th.

I am advised by the Entertainment Committee of the Auxiliary that an excellent Banquet and some very good entertainment features have been arranged for the evening of April 4th at the Orlando Hotel. There will also be a business meeting of the Auxiliary members on the morning of April 5th.

I have also been assured by Secretary Walter Dennis that the business sessions of the contractors will be very interesting as an excellent program has been arranged.

Yours truly,

F. I. EYNATTEN,

Secretary.

Peoria, Illinois, March 12, 1923.

### **Stocks Are Low; Buying Is Free and Yet Cautious.**

The testimony from nearly every section of the country is that business men at the moment are operating with caution, and are not committing themselves far in advance. Moreover, the heavy shipments of goods now under way suggest that no great quantity is being speculatively held; both raw materials and finished products are moving into consumption. What is reassuring, then, is the caution that is exercised both in the demand for, and the extension of, credit. Borrowers and lenders alike are exercising restraint. From this it will be gathered that the financial health of the United States is amply supported by the strength of its credit structure, and the manner in which that strength is being used.

It is one thing for you to want the customer to come again, and it is another to make the customer want to come again. The latter is up to you.

# Practical Helps and Patterns for the Tinsmith.

Aids to the Improvement of Craftsmanship and Business.  
News from Various Branches of the Sheet Metal Trade.

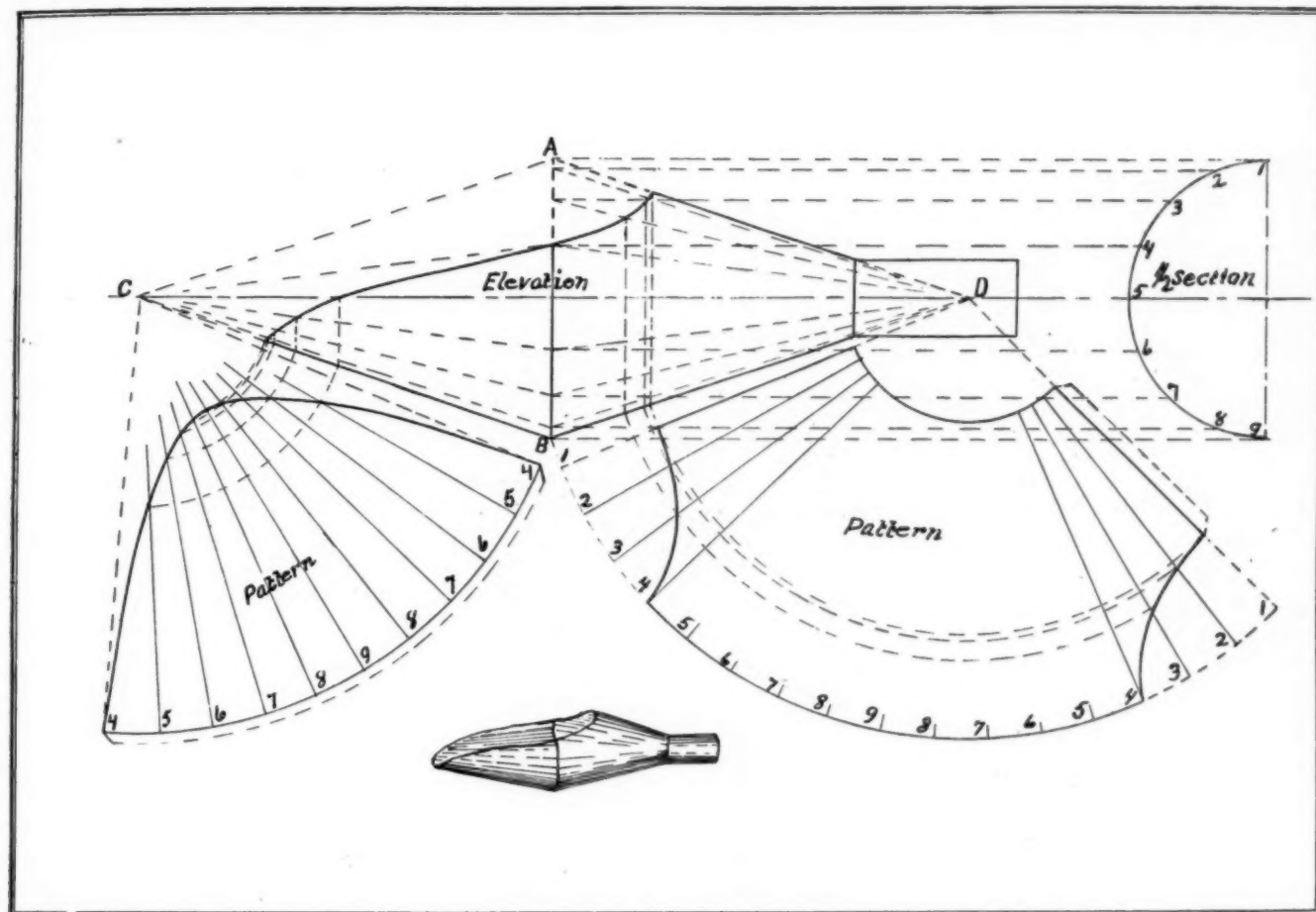
## Patterns for a Conical Scoop.

By O. W. Kothe, Principal, St. Louis Technical Institute, St. Louis, Missouri. Written especially for American Artisan and Hardware Record.

This scoop is also more of a problem of value in the cutting of miters on conical figures than for its neces-

sities. Then the miter line is traced through at pleasure. This shows that it does not matter in what way or in what position you cut a conical fitting. The treatment would be followed this way, since our cut in this case is irregular. Describe the half section which shows that the shape through A-B is cylindrical. Divide this half section

pattern. To set out the pattern for the back part, set dividers to D as center and D-B as radius, strike an arc indefinitely. From the half section pick the girth spaces and set off twice as many, establishing the points 1-1 as shown. Draw radial lines to D and then from each point in the slant line D-B, sweep arcs into stretchout, thereby cutting ra-



Designs for a Conical Scoop.

sity of making as most of these scoops are factory made. The miter development is interesting as it helps to understand other work and so it is not a waste of time in laying out.

From the elevation we see we have two cones as A-C-B-A and A-B-D-A. The axis line in the length is C-D and the short line A-B. These lines of measurements can be made anything to suit con-

into any number of equal spaces as 1-2-3-4-5, etc., and project lines to the base of cone A-B. From these points radiate lines to the apexes C and D as shown. Now where these radial lines cross the curved miter line drop lines to the slant line as B-D and D-C.

Observe this places all the fore-shortened radial lines in a true position on a true slant line and enables us to get true lines for the

dial lines of similar number. Through these new intersections, sketch the curves and you have the pattern for the back part of scoop.

For the fore part of scoop use C as center and C-B as radius, describe an arc indefinitely. Then set off the girth required to make this lip as we see the intersection of this cone merges with the base A-B in point 4 of half section. So we set off twice the spaces from 4 to 9 and 9 to 4.

Draw radial lines to C and then from each point in line C-B sweep arcs into stretchout, thus cutting lines of similar number. Through these new intersections trace a curved line, making it uniform so no hills or hollows appear, and you have the pattern for the lip of scoop. A small edge must be allowed for seaming and if a wire is to be enclosed along the edge, an allowance equal to  $2\frac{1}{2}$  times the diameter of the wire must be made for this also.

## *Wisconsin Sheet Metal Contractors Hold Ninth Annual Convention.*

*Program, Well Planned and Balanced,  
Was Full of Instructive Information.*

THE Ninth Annual Convention of the Wisconsin Sheet Metal Contractors' Association was held at the Republican Hotel, Milwaukee, on March 14 and 15, with a good attendance considering the very stormy weather, which prevented many members from attending owing to snow blockades of the railroads.

To Paul L. Biersach belongs the credit for the excellent program of speakers. Without reflecting in any way upon any previous conventions, the program at this meeting was of an exceptionally instructive and interesting character.

The managers of the Republican Hotel are also entitled to special credit for the pleasant way in which the comforts of the visiting members and guests were cared for.

And to the Travelers' Auxiliary full appreciation was voiced by all of the splendid banquet and entertainment on Wednesday evening. Ellsworth Dunning certainly did himself proud as Chairman of the Entertainment Committee, being ably aided by his co-workers, E. S. Eaton, N. I. Hilton and Al Pomering.

### **Wednesday's Sessions.**

President John Bogenberger called the Convention to order at 10:30 a. m. Wednesday and introduced Mayor Hoan of Milwaukee, who made a cordial address of wel-

## *Pennsylvania Sheet Metal Men Will Meet in Allentown, July 26 and 27.*

According to a letter received from Secretary W. F. Angermeyer, the Sheet Metal Contractors' Association of Pennsylvania will hold its Annual Convention July 26 and 27 in Allentown.

Secretary Angermeyer's address is 714 Homewood Avenue, Pittsburgh.

existing between the various interests.

### **Industrial Education.**

We find that there have been no great efforts nor strides made towards the inauguration of so-called sheet metal shops for the education of apprentices, which we all know is a great necessity, outside of such cities as Racine and Milwaukee, and in these two cities efforts are being made to educate applicants in the learning of our trade.

You are all aware of the fact as to the scarcity of mechanics, and we are of the opinion that it is the duty of all our members through our State Association to formulate such plans and prosecute the same vigorously towards creating interest in such way, shape or manner which would be inviting to such elements of young labor to enter into the spirit of an apprenticeship course.

We know that in such cities as Pittsburgh, St. Louis, Cincinnati, Peoria, New York, etc., wonderful schools for the teaching and training of apprentices of the sheet metal trade are established, and there is no reason why there should not be institutions created in our State similar to those quoted above.

This matter being of such vast importance, the committee recommends that, should the time permit, the attention of the members in Convention assembled should be fully appraised of the condition of "Shortage of Apprentices and Mechanics," and such ways and means ought to be put into being to alleviate this unwarranted and uncalled for condition.

### **Proposed Amendments to the Constitution.**

Article IV.—"The location of said Association shall be in the City of Milwaukee, County of Milwaukee, State of Wisconsin; but it may establish an office or offices in such place or places within the State of Wisconsin as the Board of Directors may from time to time designate."

Article VI, Section 1.—"The officers of the Association shall consist of a President, five Vice-Presidents, a Secretary, a Treasurer and a Ser-

come, which was responded to by the President.

Various committees made their reports, as follows:



**Carl E. Anderson,  
Secretary.**

### **Report of Trades Relation and Policy Committee.**

March 12, 1923.

There have been no complaints filed by any of our members nor any violations perpetrated by any jobbers or manufacturers to our knowledge, and it is with pleasure that we are in a position to submit such a favorable report as to the harmonious and cooperative spirit



geant-at-Arms, and these officers, with the past three Presidents, shall constitute the Board of Directors of the Association, and the chairmen of all standing committees shall be members of the Board of Directors, ex-officio."

Article X.—"The dues of each member or firm shall be eight dollars (\$8.00) yearly or such amount which the Association may fix from time to time, payable in advance to

Milwaukee ....	336.00
Individual mem- bers .....	64.00
	<hr/> 626.00

Grand total.....\$1,227.23  
Respectfully submitted,

Wm. Gallun, Treasurer.

#### Ways and Means Committee.

Your Committee on Ways and Means have, during the past year, made a survey as to the needs of

Education as to legislation, not only pending but coming up from time to time, to protect the interests of the Sheet Metal Contractors.

Propaganda towards membership increase.

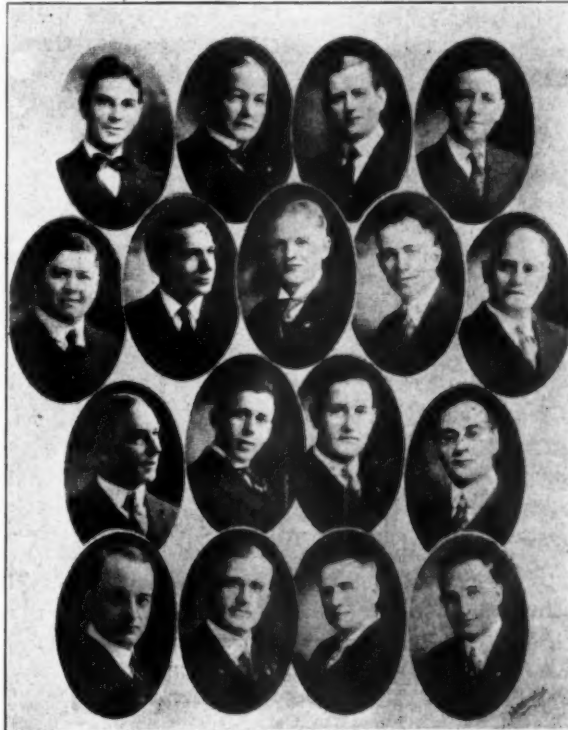
#### Report of Secretary Hoffmann.

At this gathering of the Ninth Annual Convention it is our privilege to review the work which we have accomplished the last year.

Your Board of Directors has



Edward Hoffmann  
Incoming President.



Group in Center Are Members of the Old Wisconsin Guard. Three Lower Rows All from Milwaukee. Upper Row, Left to Right—John Wallig, Kenosha; Otto Geussenhainer, Sheboygan; V. S. Kubly, Madison; G. G. Jones, Racine. Second Row, Left to Right—John Bogenberger, R. F. Jeske, Paul L. Biersach, Frank Romberger, Louis Hoffmann. Third Row, Left to Right—Joseph M. Hollitz, Henry Pluckhan, William Gallun, O. A. Hoffmann. Lower Row, Left to Right—Edward Hoffmann, E. B. Tonnsen, William Hammann, H. E. Bartelt.



John Bogenberger,  
Retiring President.

the Treasurer of the Association on the first day of January of each year."

#### Treasurer's Report.

Balance on hand April 3,	
1922 .....	\$ 446.28
Receipts for dues and per capita tax .....	517.00

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\$ 963.28

Disbursements .....	362.05
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#### ASSETS.

Balance on hand in bank.	\$ 601.23
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#### Dues outstanding:

Kenosha .....	\$ 61.00
Racine .....	53.00
Sheboygan .....	16.00
Madison .....	96.00

our State Association in their various fields of endeavor, and recommends that when tabulating a budget for the ensuing year, the Board of Directors and committees having the supervision of the affairs of our Association in charge take into consideration the necessity of appropriating such funds judiciously towards—

Advertising in general and propaganda to stimulate the use of sheet metal work.

Educational propaganda for apprenticeships and the making of mechanics.

Educational work relative to the method of doing business correctly.

worked conscientiously to promote the sheet metal industry through this Association to the best of their ability.

They have held ten monthly business meetings, which were well attended. No meetings were held during the summer months of July and August.

Although having taken in several new members the past year, I would like to say that our membership is very small considering the number of sheet metal contractors in the State of Wisconsin, and it is the duty of every member of this Association to endeavor to obtain new members and through association

work help them in their business and make them better competition in the sheet metal industry.

A folder giving the advantages and benefits derived from being members of this Association, with application blank on one side, was printed and turned over to the Salesmen's Auxiliary, and through the courtesy of their members we are attempting to obtain new members for our Association.

Should any of our members desire some of these folders, same can be obtained from the Secretary.

The Committee on Revision of By-Laws has gone over the Constitution and By-Laws carefully and find that there should be some amendments to same.

A list of amendments was printed and forwarded to the members for consideration and will be voted on at this meeting.

The Legislative Committee has been working with other organizations and some members have gone to Madison at their own expense to oppose undesirable bills that have come up before the Legislature.

In closing I wish to state that Mr. P. L. Biersach, Chairman of Convention Committee, has worked diligently in arranging the program for this Convention, and I hope you will find it beneficial, educational and entertaining.

After the roll call of officers and reading of the minutes, a number of communications were read, after which the morning session adjourned.

The afternoon session was a very interesting one and was devoted to the warm air furnace business.

Otto Geussenhainer, Sheboygan, probably one of the best posted men among the installers and a man who has given to his profession much more study than many of his confreres, as well as a man who has made a real success as the world looks at success, spoke on "Furnace Installation," as follows:

#### **Otto Geussenhainer's Address.**

In speaking of Warm Air Heating Installations in residences as well as in other buildings, I am going to treat the subject from the

installer's point of view. I am also going to limit this talk to apparatus where the heat is generated by a furnace and the warm air is conducted to the registers by gravity.

It is next to impossible for one who followed the trade 40 years to refrain from reviewing the change in the method of installation that has taken place from time to time during that time. It is true the principle that was the foundation of this method of warming houses was understood long ago. Forty years ago a cast iron furnace was much the same as today; the cold air supply was taken entirely from outside and



**A. Schumann,  
Sergeant-at-Arms.**

therefore the casings, either of metal or brick, were made so as to hug the furnace closely; the registers were placed in the floor and the register boxes, elbows, pipes, wall pipes and shoes were made by tinner's who made tinware during a large part of the year and who spent as much time making and erecting furnace installations as they did making household tinware; wall stacks were made the full length and all cross joints double seamed, even the leader pipes were double seamed this way for a while. This heating of houses with fresh air warmed to about 150° F. and distributed to the rooms was an ideal method when there were sufficient ducts for removing the foul air from the rooms. Unfortunately, ventilating ducts in dwelling houses were as scarce as hen's teeth, and in addi-

tion the house owner would close off the cold air duct to keep out the cold and thus prevent the furnace from heating at all; furnaces in consequence would overheat and still not heat. The next move of the installer was to place a large cold air register in the hall, with instructions to the owner to keep either the inside or the outside duct closed, according to whichever one he was using or not using. Regularly when the installer visited the house in response to a trouble call he would find both ducts closed. The next move was to take the cold air from the rooms and have an internal circulation, heating the air over and over except in so far the warmer air in the rooms seeks to escape through leaks in the structure and an equivalent amount of cold air from without enters also through leaks in the structure. This would seem to make the apparatus fool-proof, but not so. The installer, upon responding to a trouble call, would find the cold air registers, if in the floor, covered with a rug, or a pillow leaning against it if in the side. However, these troubles are disappearing more and more as the public learns to understand the principle underlying the heating of houses with warm air furnaces. Formerly the average installer of furnaces guessed at the sizes of warm air pipes and registers; later he divided the cubical contents of a room by 25 to arrive at the area of the pipes. This method was not much better than guessing on account of the variation in exposures.

I question if there is an installer who fails to take into consideration the glass area and the area of outside walls in addition to the contents of the room at the present time. The Educational Department of Wisconsin issues a pamphlet in behalf of rural school house heating apparatus that is instructive, and if followed will produce an ideal apparatus. It stipulates the size of flues for warm air and for ventilation as well as the grate area necessary, also the size of water pan required to provide sufficient moisture in the air. This is all very well for



school houses and for such as are anticipating installing furnaces therein.

For private houses the present day method is to provide pipes for conveyance of warm air in accordance with the cubical contents of the room and the wall and glass exposure. One of the formulas used extensively is to allow 1 sq. in. of area in the horizontal pipe for 100 cu. ft. of contents, 1 sq. in. of area for 10 sq. ft. of outside wall and 1 sq. in. of area for 1 sq. ft. of glass. Long pipes should be a size larger than the above method calls for and in addition should be covered with asbestos cell or air cell covering to retain the heat. Short pipes close to the furnace should be a size smaller than the above method calls for. Warm air pipes should be made no longer than absolutely necessary, owing to the frictional resistance to the travel of the warm air. This holds good for cold air pipes as well, therefore if for various reasons the installer must lead the cold air pipes a greater distance than the warm air pipes, he must compensate therefor.

With the interior circulation method of heating it is necessary to supply as much cross sectional area in the cold air duct as the aggregate area of all the warm air pipes, and when you have long cold air ducts compensating means larger or more cold air ducts.

The present day installer, after having ascertained the number and size of warm air pipes, will select a furnace that has 25% more free air space than the aggregate area of the warm air pipes that are to be connected to it. So much for the work in the basement.

The parts of the apparatus that appeal to the eye of the occupant of the house are the registers. Those for warm air are almost always placed in the base board and are plated or finished in harmony with the other trimmings of the room; those for cold air, if placed in the floor, are made of wood finished like the floor, and if placed in the side are finished to match the warm air registers.

The installer of today finds far better furnaces, registers, pipes and fittings, regulating devices, insulating material, etc., than his early day predecessor, and in addition, data accumulated through experience and arrived at through research work also increasing assistance from manufacturers, who realize that their interests are identical, so that he cannot fail to hold the field against other methods of heating the homes of the people.

Always keep in mind that warm air rises and that cold air falls, which means that "traps" must never be allowed in either warm air



J. W. Black,  
Retiring President of  
Auxiliary.

or cold air ducts, and that horizontal ducts must be avoided.

J. L. Loell, Salesmanager of the R. J. Schwab and Sons Company, spoke on "The Making and Selling of Warm Air Furnaces," as follows:

**Address by J. L. Loell.**

Your program calls for a discussion on the manufacture and selling of furnaces, their uses, etc.

I feel that a discussion on the subject of the uses of the furnace would be an insult to your intelligence. They are so self evident that anything I might say to you would add little, if anything, to what you are already familiar with.

I have not prepared a paper or a set talk, but if I can leave just a thought or two with you on the subject of manufacture and selling of

the furnace, I shall feel that my efforts have not been in vain,

The manufacturer of furnaces like the manufacturer of any other commodity, has certain difficulties to overcome. Unlike most commodities, however, his product does not reach the consumer as a complete unit. After he has manufactured it and turned it over to you, he is entirely at the mercy of the installer.

The manufacturer owes you a duty—a distinct duty, not to be lightly regarded—of giving you a product that will efficiently serve the purpose for which it is intended. When the consumer buys the furnace, he is mostly concerned with buying heating service. It is therefore up to you to see that you have a product that will produce heat—a heat machine—a product that is the result of years of experience, of research, of careful thought, of honesty of purpose and embodying the good old fashioned idea of quality first, so that when you have sold this product to the consumer, coupled with a scientific, efficient installation you may justly feel that you have given him value received—dollar for dollar.

I believe that the furnace manufacturer is bending every effort to produce a commodity that is both reliable and efficient. Much good work is being done by the manufacturer individually through associations and through the various universities throughout the country, by way of research, to the end that his product will serve the vital function for which it is intended. Many companies have been in existence for half a century or more and their policies are in themselves a guarantee of reliability and trustworthiness.

You on the other hand owe the manufacturer the duty, as well as the consumer, of installing a furnace in such a manner as it is best suited to produce the maximum of efficiency. You are not selling cast iron—you are selling heating service. Almost every manufacturer maintains an engineering department and is at all times ready and anxious



to serve you on any problems that may present themselves to you from time to time in your installation work.

We sometimes feel that the dealer does not take advantage of this service the way he should. It is maintained for your convenience at a considerable expense. Most companies are glad to have their engineering department assist the dealers in estimating the cost of installation, working out any intricate problems and even are willing to go so far as to submit blue prints and drawings, all to the end that each unit will yield a mutual benefit and profit, and result in satisfaction to the consumer.

The fundamentals of business will always remain the same, and the old idea of "A satisfied customer is your best advertisement," still prevails and always will prevail in spite of any high sounding notions that may be floating around in this day and age.

As I said few moments ago, you are not selling cast iron—you are selling heating service. The proper installation of any heating apparatus is an art—a science which involves experience, knowledge of heating fundamentals and a proper appreciation of the importance of the work. Some time, somewhere, someone said: "To work with love we rise betimes." If you enjoy this work you will be successful—if you do not, get out of it—you will never get anywhere. Success or failure is a state of mind, it is entirely in your hands. If you have the will power, the determination, the energy, the go-fast and the stick-to-it, you can just move the figure set as the volume of the present year's business up a peg or two.

Sales necessarily include the consideration of advertising. This subject is to be well covered on your program by Mr. Dunlap, an expert in that line. However, in passing, the manufacturer feels that the dealer is not alive to the advantages open to him. Complete advertising campaigns are worked out and are available from almost any furnace manufacturer in the business today.

This usually covers newspaper, billboard, broadsides, folders and the direct to consumer service, as well as many other forms of advertising. Avail yourself of these advantages. Dig your toes into the ground and go to it.

The closing address of the session was by Harry M. Snow, Salesmanager of the Furnace Fan Corporation, on "The Furnace Fan and Its Influence Upon the Warm Air Heating Industry," as follows:

**Address by Harry M. Snow.**

The warm air furnace has for many years been the popular means of heating the home. By popular,



**Ellsworth C. Dunning,  
President Auxiliary.**

I mean that the average seven to nine room home, costing from three to ten thousand dollars, has been heated by a warm air furnace.

This is due to the fact, first, that the initial cost of installing a warm air furnace has been low, possibly running from one-third to one-half the cost of a steam, hot-water or vapor job.

Second, on account of its simplicity and adaptability, it is easily installed, even without the aid of skilled mechanics. In fact many furnaces have been shipped direct to the owner and installed by him with the assistance of ordinary day labor. Of course this has resulted in many poorly installed warm air furnaces, but nevertheless it has added to its popularity as a simple and convenient heating system.

In the third place, it is popular

because of the service rendered in comparison with the cost of installing and maintaining it. Any one can operate it, providing there is a flue to carry away the smoke.

The very reasons that have made it popular have also militated against it, for they have made it possible for the heating engineer to find fault with it, and condemn it as an uncertain and unsatisfactory means of heating the home. I believe, and I am sure that you will agree with me, that all the complaints and faults attributed to the warm air furnace can be summed up in the one statement. No furnace manufacturer, and no furnace installer, has as yet been able to guarantee positive distribution of the heat to every room in the home.

When this can be done, all the ails and ills of the warm air furnace, as a heating system, will have been solved.

The heads of our health departments, the best heating engineers all agree that the Mechanical Fan System is by far the most perfect type of heating, the highest development of the art of properly warming and conditioning the air in any building. This system has always been so expensive that it has been impossible to install it, except where cost has not been a factor. The Mechanical Fan System has never as yet been brought to the door of the American home, and that is just what the Furnace Fan will do. That is what we believe we have done in bringing out a Fan unit operated by the power generated within the firepot of the furnace itself. I am here this afternoon to explain the Furnace Fan, and what its influence is bound to be upon the warm air furnace industry—not to try to make sales or to take contracts.

For many years, Mr. N. B. Wales of Boston, one of this country's foremost engineers, along thermodynamic lines, has devoted time and money to the solution of this problem, and after this long period of time, he has developed a Fan with a single bearing and requiring no lubrication. Many, yes more than

a dozen different and distinct units have been built and operated, before the real solution was obtained.

This is not a mere toy, not a booster to be run for a few minutes, and then shut down, but a real mechanical Fan, operating all the time at a speed in proportion to the intensity of the fire within the furnace, and driving a flood of pure warm fresh air, more than 1500 cubic feet per minute, throughout the home.

#### Detail Description of Furnace Fan.

The Furnace Fan is operated by a Pelton type water wheel of stamped Armco iron, directly connected to the Fan. A single bearing with granite bronze bushings, together with a hardened steel step bearing, properly sustains the entire operating mechanism. The maximum speed of the Fan is approximately 450 R. P. M., at which speed it will handle something over 1800 cubic feet of air. The speed of the Fan is always in proportion to the intensity of the fire within the furnace, due to the greater or less amount of steam generated in the small heating element. This steam passes into a Duplex tilting trap of very simple design. The steam pressure which under normal firing conditions approximates ten pounds, reacts on the water in the trap and supplies the jet of hot water which operates the turbine wheel. The water in being discharged from one end of the trap passes through the nozzle and through the turbine into the condenser chamber wherein is located a water heating coil which heats water for domestic purposes, as well as supplying heat to the humidity pot which supplies the duct with the proper amount of vapor for its humidity content. The boiling hot water, after completing this circuit, passes back into the other end of the trap, where it, in turn, will be reacted upon by the steam pressure when the trap has tilted into its other position. In this manner, a small rapidly circulated circuit of boiling hot water operates the turbine wheel and, through a small shunt, in the circuit under

pressure, the water necessary for the heating element is furnished without any moving parts or pump.

The operative cycle could be best described as a perfectly closed one in which heat supplied to the heating element upsets the equilibrium of the water body, causing the same to operate the turbine wheel until equilibrium is restored, or in other words, until the fire in the furnace has fallen to a point so low that it will not generate any vapor in the heating element.

A system of this kind is essentially so simple that it could be left unattended for weeks, maintaining itself in constant operation as and when the heat from the fire sets it into operation.

Due to the small amount of water in this circuit, namely five gallons, the Fan operates at very low fires, making the device very sensitive. There being no reciprocating parts, the Furnace Fan operates perfectly noiseless, the relative low speed of the Fan insures an absence of vibration or any sustaining note in its operation. A person may stand three feet away from the Fan and would not know that it was in operation by any external indication.

A live discussion on the problems of retailing of furnaces followed, and it was clearly shown by several installers that the so-called "direct installer" has no chance for success when the local contractors are on the job. Mr. Geussenhainer, for instance, cited the fact that in his home city of Sheboygan two "direct" concerns had found it necessary to change their "managers" practically every year because the latter could not make a living—and they were fairly good salesmen at that.

#### Banquet Great Success.

The banquet and entertainment was fine. The Republican Hotel steward certainly knows how to prepare and serve a dinner in a manner pleasing to the diners and creditable to his employers, and as noted in the foregoing, the entertainment was of exceptionally high order, special mention being made of the

famous TeeBee team, Bill Laffin and "Trow" Warner, whose black-face skit was as good as ever; also of Joe Svoboda and Frank Nelson, two real sheet metal and furnace men, who proved their ability to coax sweet music, of the classic as well as the popular order, from piano and violins.

Ralph Blanchard's quartette "favored" the banqueters with the following ditty:

#### Soup to Pie.

(Sung to the tune of "Hail, Hail! the Gang's All Here.")

Soup! Soup! We all want Soup!  
Tip your bowl and drain it,  
Let your whiskers strain it,  
Hark! Hark! the funny noise,  
Listen to the gurgling boys.

Fish! Fish! We must have Fish!  
We don't want it Bon-y,  
Nor a little Phon-ey,  
Fresh Fish; We won't eat stale!  
Any kind of fish but whale.

Meat! Meat! Bring on the Meat!  
Fresh and Juicy Cow Meat!  
Ham and Pickled Pigs' Feet!  
Lamb Chops! and Pork Chops, too,  
Any kind of meat will do.

Pie! Pie! We want our Pie!  
Cocoa-nut and Cher-ry,  
Peach and Huckle Berry,  
Mince Pie is Might-y Fine!  
That's the way Sheet Metal Men dine.

#### Hosts at Dinner.

George F. Levzow, Dunning Heating Supply Company.

Alfred J. Wussow, R. J. Schwab & Sons Company.

Hugh W. Jones, Scully Steel & Iron Company.

E. S. Eaton, L. J. Mueller Furnace Company.

E. C. Taylor, Premier Warm Air Heater Company.

Edward C. Carter, *Furnaces & Sheet Metals.*

J. Harvey Manny, Manny Heating Supply Company.

H. P. Barnes, Michigan Stove Company.

Alfred H. Pomrening, R. J. Schwab & Sons Company.

E. M. Tyler, International Heater Company.

C. R. Guenther, Abram Cox Stove Company.

George B. Carr, Carr Supply Company.

Etta Cohn, *AMERICAN ARTISAN AND HARDWARE RECORD.*

D. Van Evera, Excelsior Steel Furnace Company.

John L. Loell, R. J. Schwab & Sons Company.

S. L. Memhard, *Furnaces & Sheet Metals.*

J. R. Holmes, Premier Warm Air Heater Company.

H. C. Barrager, W. F. Mortimer, S. N. Pollak and H. L. Jackson, Meyer Furnace & Supply Company.

J. M. Beech, International Heater Company.

E. C. Dunning, N. I. Hilton, E. E. Dunning and Ross O. Aton, Dunning Heating Supply Company.



A. E. Zilisch, The Majestic Company.  
 William P. Laffin and T. A. Warner,  
 Tuttle & Bailey Manufacturing Com-  
 pany.  
 J. W. Black, Wheeling Corrugating  
 Company.  
 L. R. Moise, Milwaukee Rolling Mill  
 Company.  
 H. E. Schwab, R. J. Schwab & Sons  
 Company.  
 Owen McGrath, Merchant & Evans  
 Company.  
 C. F. Mento, R. J. Schwab & Sons  
 Company.  
 R. W. Blanchard, Hart & Cooley Com-  
 pany.  
 Arthur Beilfuss, L. J. Mueller Fur-  
 nace Company.  
 J. J. Callaghan, Fox Furnace Com-  
 pany.  
 Fred Craig, Asbestos Shingle Com-  
 pany.  
 Edmund Eitel, Special Chemical Com-  
 pany.  
 William G. Harms, Rock Island Reg-  
 ister Company.  
 William Gunton and August Luecker,  
 R. J. Schwab & Sons Company.  
 George Harms, F. Meyer & Brother  
 Company.  
 Nelson McDonald, MacIntyre-McDon-  
 ald Company.  
 Thomas Pearson, Lamneck Company.  
 E. A. Liessman, L. J. Mueller Fur-  
 nace Company.  
 Edwin A. Scott, *Sheet Metal Worker*.  
 H. H. Wherry, Follansbee Brothers  
 Company.  
 A. J. Madson, Wheeling Corrugating  
 Company.  
 George G. Zingsheim, Richardson-  
 Boynton Company.  
 F. S. Cole, Rudy Furnace Company.  
 Edwin L. Fiske, W. H. Colebrook's  
 Sons.  
 Joe Svoboda, Utica Heater Company.  
 A. G. Pedersen, AMERICAN ARTISAN  
 AND HARDWARE RECORD.

#### Thursday's Sessions.

At the Thursday forenoon ses-  
 sion C. W. Pansch, Racine, read the  
 following paper on "General Ways  
 for Sheet Metal Men to Advertise":

#### Excerpts from Mr. Pansch's Paper.

Before considering any good  
 ways for the sheet metal contractor  
 to advertise, let us first determine  
 if he should advertise at all.

Many shop owners think that ad-  
 vertising is necessary only to the big  
 manufacturer and national distrib-  
 utor. Every shop owner is the  
 answer to the manufacturers' reason  
 for advertising. The manufactur-  
 er's advertising, of course, backs up  
 your sales. *But*—you are the direct  
 contact through which his sales are  
 made. Are you—who actually sell  
 and install furnaces and use his and  
 other sheet metal products in per-  
 sonal service to the consumer—less  
 important than the manufacturer?  
 If you are not advertising *Yourself*,  
 you are, at least, by good service to

your customers, popularizing the  
 material with which you give that  
 service. If, on the other hand, you  
 do advertise yourself, you are using  
 the manufacturer's advertising and  
 the quality of his goods to popular-  
 ize *Yourself*.

It naturally follows that if it pays  
 the manufacturer to advertise to  
 you—who are his personal cus-  
 tomers—it must pay you to adver-  
 tise to the consumer of *Your*  
 services.

Many shop owners, moreover,  
 have a mistaken idea of the mean-  
 ing of the term "advertising." The  
 word advertising is derived from  
 the Latin prefix "ad," meaning  
 "to," and the verb "verto," to turn,  
 conveying the idea of turning to,  
 i. e., the word advertising means  
 turning business to. Therefore, a  
 man advertises to turn business his  
 way. That is why the great big  
 manufacturers advertise. They do  
 it to turn business their way from  
 all over the country.

Someone may be thinking right  
 now that he does not need to ad-  
 vertise because every last person in  
 his town knows him. But that  
 thought contains the crux of the  
 whole situation. Such firms as the  
 Milwaukee Corrugating Company,  
 the Ferdinand Dieckmann Com-  
 pany, the Braden Manufacturing  
 Company, the International Heater  
 Company, and numerous others, are  
 so well known that their large ad-  
 vertising appropriations cannot be  
 made for the sole purpose of fa-  
 miliarizing the public with their  
 names.

They are striving for something  
 bigger than merely to make them-  
 selves known. You may properly  
 ask the question: Then what are  
 they seeking to accomplish? They  
 are striving, not only to get new  
 customers by advertising their re-  
 liability and the quality of their  
 goods, but to keep their customers  
 satisfied by telling them over and  
 over that they are getting the best  
 for the least outlay of cash. They  
 are keeping them informed as to  
 new developments in their line.  
 They are keeping a close contact  
 with their trade, *Because* their com-

petitors are constantly trying to get  
 these customers away from them.

If every last one in your town  
 knows you are running a reliable  
 business, you have a wonderful op-  
 portunity to advertise and "dig  
 yourself in" against the day of com-  
 petition. Many a less worthy "out-  
 of-towner" has ousted a reliable  
 shop by stepping in and advertising.  
 A man who has all the business he  
 wants without advertising is dodg-  
 ing the responsibility of enlarging  
 his business and his field.

Let us give a little thought to good  
 ways for sheet metal men to adver-  
 tise and see just how many of the  
 ways every man in this room can  
 use.

1. Every shop should have a  
 neat, suitable sign, carrying the  
 name under which the business is  
 carried on, together with a descrip-  
 tion of the business; thus, Excel-  
 sior Sheet Metal Works, Roofing,  
 General Sheet Metal Work and  
 Furnace Heating. Such a sign is  
 good advertising—necessary adver-  
 tising.

2. Next, see that your truck car-  
 ries a similar sign around town  
 while out on a job or errand. Here  
 is a "sandwich" man who will bring  
 home the bacon for more sand-  
 wiches.

3. Have a sign to display on all  
 buildings in which you are work-  
 ing, to let those who pass know that  
 the sheet metal work, the roofing,  
 the furnace heating, or whatever it  
 may be, is being done by you. Here  
 is valuable advertising space, which  
 is unique in its appeal. This sign  
 not only tells people what you *Can*  
 do and will do for them, but it also  
 says that you are doing that sort of  
 work *Now*—in that very building.  
 Here is "background" for advertis-  
 ing that is recognized fully only by  
 the advertising man, even though  
 this form of advertising is out of  
 the realm of profit to him.

4. Next in this division of ad-  
 vertising comes the road billboard  
 or poster advertising sign. The  
 sightseeing and pleasure-and-busi-  
 ness-going thousands that pass over  
 the highways are in a receptive  
 mood. Road signs pay, and by the



use of sheet metal forms in frames or border, offer the sheet metal worker opportunities to use what few advertisers can in road sign work—samples of their work.

5. A neat, attractive shop front and the shop building itself is a good advertising sign. For example, an all metal building is most suitable for a sheet metal shop. Let it have a metal roof, a metal cornice, metal windows and doors, metal siding and with metal ceiling and metal trim.

6. An attractive show window, with exhibit of work or materials will attract attention. Show in the windows a furnace, wall pipe, fittings, skylights, leader, gutter and elbows, a heat regulator—any of a score and one articles. But do not show them in a dusty, careless, ill-arranged way. Arrange them attractively and change your displays frequently. Use show cards to tell the passers-by some message that will interest them or give them some new information, say, for instance, about the long life and satisfaction of your copper, zinc, or tin shingles or roofing, about the economy of a coal saving device. If you become interested in this form of advertising, you will get a great deal of pleasure as well as profit out of preparing these cards.

Now let us turn to what we may term printer's ink advertising.

7. First, comes the advertising you can do with your letter heads, bill heads, statements, estimate sheets, contract blanks and your stationery in general. Like your shop sign, your stationery should naturally carry the shop's name and the lines of business. A specially designed letter head is well worth the extra cost over the ordinary printed kind.

8. In this connection you can use a trade name, even if it is no more than a special design of lettering for your shop name. If such is adopted, and used continuously, it likewise serves as a good advertisement.

9. Every shop should have a business card carrying out the general idea of the letterhead.

10. Your contract blanks comprise another method of advertising. The very fact that you have a contract blank or order form to sign, will impress your customers with the fact that you do business in a business-like way. Besides, it is an excellent idea to have a written order, giving full particulars on what you agree to do on every job.

11. Use circular letters frequently to your customers, and prospective customers. Send out seasonal letters calling attention to repairing roofs, leaders and gutters, re-roofing buildings, painting roofs, repairing heating systems, installing new heaters and scores of other items. Make these letters timely and they will advertise your business to good advantage. To do this, you will of course have to build up a mailing list, but every well managed shop should have such a list.

12. Closely associated with this come announcement or reminder cards and printed circulars. These may be prepared to call attention to seasonal work which should be done, to work on which the shop is specializing or is admirably equipped to do, or some new line or specialty which it is handling.

13. An acknowledgement card, used to acknowledge an order with thanks and advising the date on which the work will be started is also an effective bit of advertising.

14. Next comes the envelope stuffer. These may be printed at the shop's expense, but it will be found that many manufacturers will furnish these with the shop's name imprinted, for the asking. Have something of this kind to go out with every letter.

15. Blotters are good advertisers. Designs suitable for the sheet metal shop are submitted herewith. They are used effectively by a great many shops. They may be had at a small expense from a local printer and where special illustrations are desired, the drawings and plates may be obtained at a nominal cost.

16. Next comes the souvenir idea—pencils, crayons, scale rules, rules of different kinds, ash trays,

match boxes, etc., all with the name of the donor printed on them. The pencil and the crayon are the most appropriate for the sheet metal shop.

17. Newspaper advertising is probably less effectively used than any of the other forms of advertising open to the sheet metal shop. Too frequently, when it is used, it is only in the shape of a business card and never changed.

To get the greatest good out of this kind of advertising, it should be changed frequently. Make up an interesting message. Get away from the cut-and-dried style. Use something unique—something that will get people to look for what you are going to say this issue. Tell them what your shop can do, and why you can do it to their entire satisfaction. Many manufacturers are prepared to send cuts and copy to shops desirous of advertising either in newspapers, by circulars or circular letters.

18. A word on the value of illustrations will not be out of place. We are all children grown up, and still enjoy pictures. They attract our attention, and therefore can be used to advantage, in our advertising. As proof of this, watch anyone running through any of the magazines. Note how they will pause at least every time they come to a well illustrated advertisement. It is because of the effectiveness of illustrations and art work in advertising that sometimes hundreds of dollars are spent for just one illustration.

But it would not pay the sheet metal shop to go to any such expense. A shop owner can, however, obtain suitable illustrations at a reasonable cost. Your trade journal will always tell you where you can procure suitable illustrations as well as make valuable suggestions on your advertising problems.

In closing, let this fact be emphasized, if you are to succeed: Let your advertising represent your ideal as you can live up to it, in other words, follow the slogan:

*"Live up to your Advertising."*

Mr. Pansch supplemented his paper with samples of his own advertising which is of an exceptionally high order.

Walter F. Dunlap, who is an advertising agency man in Milwaukee, spoke on "Good Advertising Methods, Individually and Collectively, for the Sheet Metal Industry," drawing lessons from his own experience.

One of his many excellent points was that when an installer was selling a furnace the important thing for him to do was to sell the prospect not so much on the furnace itself as on the comfort and convenience that would be obtained by purchasing his particular furnace, the speaker emphasizing the fact when this method was followed the matter of price became of much less importance.

But after such a sale, he said, the installer should have the house photograph, a half-tone made from the pictures and secure a letter of recommendation from the owner—after the furnace had been operated for some time—and then use the cut and the letter as advertising "copy" for his local newspaper or for circular advertising.

The afternoon session was devoted largely to talks on the Lien Law, the Business Outlook and Sheet Metal as a Fire Preventative, the latter by Harry C. Knisely, Chicago.

The election of officers resulted as follows:

President—Edward Hoffmann, Milwaukee.

First Vice-President—William Gehrke, Sheboygan.

Second Vice-President—V. S. Kubly, Madison.

Third Vice-President—Hans Lindas, Kenosha.

Fourth Vice-President—Alfred Goethel, Milwaukee.

Fifth Vice-President—Louis Rath sack, Manitowoc.

Secretary—Carl Anderson, Racine.

Treasurer—R. E. Kelm, Milwaukee.

Sergeant-at-Arms—Adolph Schumann, Milwaukee.

### *Ellsworth C. Dunning Is Head of Wisconsin Sheet Metal Auxiliary.*

At the annual meeting of the Travelers' Auxiliary of the Wisconsin Sheet Metal Contractors' Association, held at the Republican House, Milwaukee, March 15th, it was decided that the Board of Directors should look into the matter of a summer outing for the Association and Auxiliary with their families and friends.

The following officers were elected:

President—Ellsworth C. Dunning, Dunning Heating Supply

Company.

First Vice-President—E. A. Liessman, L. J. Mueller Furnace Company.

Second Vice-President—John M. Beech, International Heater Company.

Secretary—L. R. Moise, Milwaukee Rolling Mill Company.

Treasurer—Hugh W. Jones, Scully Steel and Iron Company.

Directors—J. W. Black, Wheeling Corrugating Company; E. C. Taylor, Premier Warm Air Heater Company; Henry Stacker, Republic Iron & Steel Company, and E. M. Tyler, International Heater Company.

## *Iowa Sheet Metal Contractors Brave Storm to Attend Convention.*

*They Are Rewarded by Program of Splendid Addresses, Full of Practical Ideas.*

THE Third Annual Convention of the Iowa Sheet Metal Contractors' Association was held March 14th and 15th at Sioux City, Hotel Martin being the headquarters.

The stormy weather naturally cut down the attendance, but those who braved the snow were certainly well repaid for their efforts. The program of the business session was fine and the banquet and entertainment tendered Wednesday night by the Auxiliary was thoroughly enjoyable. President Anderson, Harry Hussie and Blair Quick, all of the Auxiliary, certainly kept things moving that night.

The first session called to order at 10:15 by L. M. Cahill, President of the Sheet Metal Contractors' Association of Sioux City, Iowa, introducing A. B. Darling, President of the Sioux City Chamber of Commerce, who extended a hearty welcome.

Mr. Cahill then introduced N. A. Lichty, President of the Iowa Sheet Metal Contractors' Association, who responded, expressing great praise for Sioux City. He expressed his pleasure he felt in addressing the convention, and the good to be de-

rived from the association and its convention, stating the prosperous men in nearly every line of business were the men who belonged to the associations. He spoke of the desirability of bringing the work of the sheet metal worker more to the notice of the younger generation, stating that boys would be interested in this work if they knew more about it; clerical work appeals to them because they know more about it. He advocated vocational training schools and apprenticeship schools. The salaries or wages received by apprentices and by finished workmen were greater than that paid in many educational institutions and clerical positions, he said, and the shortage of workmen could be overcome if the boys could be interested in this line of work.

The following Committees were then appointed.

Auditing Committee—W. R. Backman, Des Moines; L. A. Ilten, Cedar Rapids, and R. E. Bockert, Fort Dodge.

Resolution Committee—John G. Wright, Waterloo; Peter Ehlinger, LeMars, and J. E. Johnson, Sioux City.



Question Box—L. A. Brand, Sioux City.

President Lichty announced that he would appoint a Nominating Committee during the afternoon session, owing to the delay in arrival of a number of members.

Secretary R. E. Pauley read a telegram from George Harms from Palm Beach, Florida, wishing everyone a profitable and enjoyable time in Sioux City and extending good wishes and greetings.

E. B. Langenberg, St. Louis, gave an invitation to all members of the associations to attend the Annual Convention in St. Louis, June 25th to 29th. He said that it was often only the big men in a business who attended the National Conventions, but that these conventions were to help the smaller members to grow larger and broader and that the convention was just as profitable to them as to the bigger and more prosperous man. The lobby talks and the convention speeches all developed him to be more than the "Average Man."

Mr. Langenberg referred to the fact that some associations had made a change in their name and stated that one of the Philadelphia Locals was known as "The Roofing, Metal and Heating Engineers of Philadelphia, Incorporated," and that this change has had a wonderful effect on the public and on the business of the members in the way of prestige. He also spoke of the attractiveness of St. Louis, the drives surrounding the city, the Opera House, and the program that was being prepared for the entertainment of the convention and urged all members to come and develop their business and themselves.

President Lichty then read a letter he had received from F. E. Ederle, Grand Rapids, Michigan, Secretary of the Michigan Sheet Metal Contractors' Association, which had come to him through a visit with Mr. Young, who had formerly been secretary of the Michigan Association.

The letter told of the experiences of the Michigan Association in deal-

ing with the problems of Cost and Overhead Expense, and the work of the Trade Extension Board, composed of delegates from the local associations; also some of their methods of financing the association.

During the afternoon session, L. M. Cahill, President of the Sioux City Local, spoke on "Making Sheet Metal Workers," as follows:

#### **Making Sheet Metal Workers.**

About one year ago the Sheet Metal Contractors' Association and the Sheet Metal Workers' Local Union, realizing the serious short-



**N. A. Lichty,  
Re-elected President.**

age of skilled mechanics, appointed committees from their respective organizations to work together and devise ways and means by which a school might be started for the purpose of teaching sheet metal pattern drafting to the apprentices employed in the various shops of the city.

And since I served on this committee in behalf of the contractors, also as instructor of the school, I am in a position to give a brief outline of the progress of this school up to the present time.

First, to establish this school it was necessary that a class room, black boards, drafting boards, etc., be provided.

By making inquiries we learned that there was just such a class room at the high school that might be used.

We appeared before the School Board at one of their regular meetings and informing them of the approximate number we expected to enroll and hours class would be held, we were able to obtain this room, together with heat, light and janitor service, free of charge.

I found the Board of Education of Sioux City very encouraging in every way, being instrumental in obtaining an appropriation of five dollars per night from the Iowa State Board of Vocational Training to help finance the costs of this school. By accepting this appropriation we are naturally under the jurisdiction of this board.

These classes are held every Friday night from 7:30 to 9:30 and every fourth Friday we meet at the shop, where the apprentices receive the actual experience of forming and assembling the various patterns drafted at three previous class nights. Neatness and accuracy is the slogan at the shop on these nights.

Each apprentice is required to pay twenty-five cents for each class.

This fee is collected by the union to which they belong, and must be paid whether they attend or not; the balance of the expense, such as drafting paper, tin for assembling patterns, is borne jointly by the union and contractors.

At the beginning of school each apprentice filled out a questionnaire, stating where he was employed, how long he had worked at the trade, etc.

My reason for doing this was that I might know how to handle each individual apprentice and not be talking in trade terms that would more confuse than help.

They are started in elementary studies and the right and wrong way to handle instruments, then taking up the simpler forms of parallel line development, such as elbows, tee joints and cornice mitres. This is followed with radial lines and into the most advanced stages of triangulation, embodying the various branches of our trade.

Strict order is maintained and a recitation record is kept, each stu-



dent handing in his drawings, which are corrected and returned to him the following class night.

#### **Dodd Gives Prizes for Best Work.**

The boys are very regular in attendance, and I believe the Sioux City contractors will bear me out when I say a great deal of improvement has been accomplished along this line.

Mr. Dodd, of the Standard Furnace and Supply Company, has given fifty dollars to be distributed as prizes to the boys making the best record at the close of the fiscal year.

Each student's drawings, with his attendance record, are kept together, and this governs the distribution of prizes.

We have on display dozens of models made by these boys that are a credit to them, and I believe that when it comes to making real sheet metal workers this must be done while the boys are in their apprenticeship, for as soon as the average boy is advanced to the scale and enters the field as a journeyman, he quits his studying. Of course, there are exceptions to this, as our foremen and best mechanics have not stopped, but I refer to the average man. I doubt if 10% of the journeymen who are drawing the scale understand triangulation, and I think it is the duty of every employer to encourage and assist every apprentice that is actually trying to improve himself along these lines.

While the majority of the larger shops have one man that drafts all patterns, it is much easier for a foreman when he has mechanics who can readily understand his details and drawings and perhaps detect an occasional error that will save time and material, and the mechanic can do this if his eye is trained to the way these patterns should look in the flat.

How many ventilating contractors have over one man in their entire crew that can get out a vent job from the plans?

And how many furnace contractors have mechanics that can determine the size of a heater by the

computation of figures, which is the only correct method?

Some may think these are technical questions that they are not required to know.

I say, every mechanic should be able to answer them.

A mechanic that can go out and talk to the public in a convincing and intelligent manner creates a prestige for himself and his employer and is an asset to any shop.

Such a man is worth more money and should be paid accordingly, and if you let the poorer man know this you will create a big incentive for the unskilled man to improve



**R. E. Pauley,  
Re-elected Secretary.**

himself, so that he, too, may command the higher wage.

#### **How Mechanic Is Tested.**

I read not long ago of one of the leading shops in the East that has a room fitted up with drafting boards and models similar to these we have, and when a man applies for a job he is asked to draft patterns for any or all of these models; if he isn't competent to do so he doesn't get the job.

This employer gets only the best mechanics and pays them accordingly, and figures they are worth the money to him, and I believe he is right.

A sheet metal shop with a reputation for first-class mechanics and workmanship simply verifies the old adage which runs, that if a man writes a better book, sings a better

song, or builds a better mouse trap than his neighbor, though he build his hut in the wilderness, the world will make a beaten path to his door.

I recognize among you men some who were prominent in the cornice business years ago, and I ask you men, why did we lose the cornice business? Simply because the architect quit specifying it.

Why did he stop?

Because the owners were continually "hollering" about the workmanship, mitres coming apart, dentals falling off and joints opening up where rivets should have been placed.

The architects grew tired of the continual complaints and began to look around for a substitute.

They were greeted with open arms by the terra cotta men, who showed them how it was impossible for their dentals and brackets to fall off, since these were molded in one piece.

They also told the architects that designs to conform to any order of architecture could be furnished.

But terra cotta has had its fling; it has been weighed in the balance of time and found wanting.

Twenty years of exposure to the elements and constant vibration of city traffic are loosening those heavy sections from their moorings, and not only are the brackets falling, but the entire sections fall.

Only last summer a section weighing tons fell from an eight-story building in an Eastern city, striking a street car and killing seven people.

To be candid, the cornice business was lost on account of poor workmanship, due perhaps to competition growing so keen that the contractor could not afford to do workmanlike jobs as in earlier days.

Workmanship was sacrificed for speed, and in so doing we have lost one of the best branches of our industry.

#### **Metal Cornices Coming Back.**

Sheet metal is the only logical material for cornices, being light in weight, easily assembled and erected and is economical in first cost in comparison to terra cotta.

And it is coming back. All the leading advocates of sheet metal, all leading trade journals and authorities on the subject, proclaim its return by leaps and bounds.

Older architects are dying off and the younger man cannot understand why his predecessor experienced so much trouble with sheet metal.

At least, he is going to see for himself, and so it is up to us to see that the younger architect's confidence in sheet metal is not violated.

So it all simmers down to the making of sheet metal workers.

Let us encourage these apprentices throughout the country so that our future mechanics may rightfully call themselves *Sheet Metal Workers*.

#### Banquet and Entertainment.

As mentioned before, the banquet tendered to the contractors and their ladies by the Auxiliary on Wednesday evening was a huge success.

President C. F. Anderson of the Auxiliary was toastmaster and in his introduction of the "impromptu" speakers showed his ability to pick out clever anecdotes that fit each person beautifully.

Blair Quick and Harry Hussie ran a close race as funmakers with their witty remarks and special "stunts."

At the Thursday forenoon session E. C. "Buck" Taylor, Salesmanager of Premier Warm Air Heater Company, spoke on "Furnace Merchandising," as follows:

#### Buck Taylor's Address.

Webster gives the definition of the verb "merchandise" as "trade or traffic." Broadly speaking, the term has come to mean more than just selling or trading, and among business men it is generally recognized that a good merchandiser is one who sells his merchandise at a profit. Consequently, when I speak about the Merchandising of Furnaces, I mean the selling of furnaces at a profit.

Have you ever stopped to consider the reason for your business existence? What idea did you have in entering the business field? The first legitimate reason is one of serv-

ice, for you are the constituted purchasing agent for a certain group of people in your locality. When you cease to function as such, your days in business are numbered.

The second reason is as legitimate as the first, viz., to make money. You invested a certain amount in your business and took the risk of losing it in order to make more. The fact that you are all progressive, live-wire business men indicates that you are serving your community as it should be served. However, are you making money?

In all probability, one of the most essential things in building up a successful furnace business is the



E. C. "Buck" Taylor.

selection of the proper line of furnaces.

There are two classes of furnaces which *sell Well*. One, the quality line, sold with a quality installation and at a price that will guarantee the dealer a profit. The other is the cheap line, and when I say cheap I mean *Cheap*. This class of merchandise probably does better in the large city, where the individual buys a more or less ready-made home. Incidentally, those installations are usually cases where the contractor is perfectly willing to accept anything that carries a galvanized iron casing.

In my estimation this class of work has done our industry an immeasurable amount of damage.

Naturally, when you have the very cheapest line on the market, it does not require much in the way of salesmanship. Lines that have neither price nor quality in their favor are essentially hard to sell. From the above, the conclusion is easily arrived at. The point we are interested in is the selling of a quality furnace at a quality profit.

The selection of the line of furnaces that you are going to handle can readily be compared to the excavation of your business house. Your manner of installing becomes the foundation. One and inseparable, both dependent on each other.

How well are you laying that foundation? Do you take the same care with a customer's house that you would with your own? Are the Warm Air Pipes amply large, Registers and Boots of full capacity? Are the Cold Air Returns free from friction all the way back to the furnace, and are they equal in total capacity to the amount of warm air taken off? Are the Boots so made that they distribute the cold air supply to the furnace beneath the level of the grate? Is the job balanced? By that I mean, if you drew an imaginary line across the center of the casing, would you find half of the warm air pipes on one side and half on the other? The same principle applies to the cold air. Finally, the Chimney—is it large enough and high enough to provide ample draft? If it does not comply with the proper rules, better have it out with the man who owns the house before the furnace is installed than to have a fight afterwards. Far better to lose an undesirable job once in awhile than to have to remove a furnace which is not at fault.

#### Poor Installations Mean Failure.

But what connection has all this with good merchandising? Just simply this, the best furnace made cannot overcome a poor installation, and without a good installation the quality of your merchandise is falling down. You have heard similar remarks for just as long as you have been attending conventions, and they are just as true today as they were the day they were first uttered.



When you have completed the installation of a furnace in a man's home and that job is working perfectly, you have accomplished something very definite. In the first place you have rendered mankind a definite service, inasmuch as you have helped him to overcome the elements by warming his home. Second, you have built up a certain definite good will and one that has a tangible value. Third, you have established a reputation for yourself that, in the final analysis, is the best advertising it is possible to obtain.

#### Know the Furnace You Sell.

It now becomes a matter of salesmanship to successfully merchandise your wares. The most essential thing about salesmanship is to know your line. Have you ever read the catalog through that the manufacturer sends out? Have you read any of his pieces of advertising through? Do you make the same claims for his product that he does? Can you really expect to know your line without reading this advertising through? These may sound like simple questions to you, but I have had more than one dealer confess that he had not done any of them, and I have seen men trying to sell a furnace at retail who showed plainly that they had never read a word about the product that they were trying to sell.

Know the line of merchandise that you are selling, whether it is furnaces or down spouts. Find out all about it, and then tell the man you are selling as much as you can. He is definitely interested.

#### Know Your Competitors' Furnaces.

I believe that the next most important thing to know after knowing your own line is to know the other lines that are handled in your community. Try to know them as well as you do your own. It will soon become an easy matter when you do know them, to find out, without ever asking a question, just what lines a man may be considering. He may ask you some simple question that will say just as plainly as though it were written down, "I have been looking at the Blank fur-

nace." It then becomes possible for you to draw a comparison between the two pieces of merchandise without ever mentioning your competitor's name, and your prospect will admire you for playing the game fair and square and in a good, clean, businesslike manner.

Creating a desire for your products is equally as important as a thorough demonstration of them. The place to do that, in a good many people's estimation, is in your local newspaper. It can also be achieved by making your installations so good that people tell each other about them. That's one of the best ways I know of and one



E. I. Dodd.

that pays mighty big rewards, too.

#### Tell By Advertising.

Talk your product at every opportunity that you get and, as the saying goes, "Tell the World" you put in furnaces and that you know how to put them in right. Always remember that the other fellow hasn't quite as good an estimate of yourself as you have and in a good many things the man who takes the most unto himself gets the farthest. William Smith, Heating Engineer, always commands more respect from your fellow citizen than plain Bill Jones, Tinner.

Creating desire can also be done very efficiently through the follow-up systems which most manufacturers have to aid the dealer, and every bit of advertising that the

manufacturer has should be put to work in your interests. House signs play a far greater role in creating desire in your community than most men give them credit for. The Holland Furnace Company has been a conspicuous example of this and have gone so far as to put a small sign which reads "Holland Furnaces Make Warm Friends" on houses where they not only did not install a Holland, but did nothing more than clean the furnace. That reiteration of their slogan, "Holland Furnaces Make Warm Friends," which they gain by having a man walk down the street and see that sign on house after house, has been the means of selling a good many Holland furnaces.

#### Varied Forms of Appeal.

One of the most important things in selling any sort of merchandise is the appeal which you make to your prospective customer. Every man is a "law unto himself" in this respect, and what wins the name on the dotted line in one instance may not cause more than a passing interest in the next. You, better than anyone else, are best fitted to decide what sort of an appeal to make to a prospective customer. One man may love his wife and family and the idea of a furnace keeping his loved ones warm and healthful, even though he is not at home, may be the deciding factor. Another man does not care a tinker for that, but the thing which interests him is that he may be able to sit in front of a register and toast his own shins, with the result he will be found sitting there in a comfortable chair. The third man may be interested in the mechanical side, pure and simple. Whatever appeal is best fitted to the prospect is the one which should be used, and nothing but a keen study of human nature can tell you what appeal is best suited.

It is a fundamental rule of selling that brunettes are usually interested in the comfort and pleasures which they and their families may derive from anything they buy. Brunette men usually have a picture of their wives and families in their



offices or on their desks, while blondes rarely do. Men of the blonde type are more interested in what they can do with the furnace, the power which it has, the ease with which it may be operated—in general, the construction of the article and what can be expected from it—and if you can show them where it is a powerful heater, and the results which can be obtained from it, you have gone a long way towards creating desire in them.

#### Use Testimonial Letters.

Probably the hardest part of a sale is the "closing." A good many men can create desire and make the right sort of appeal, but when it comes to closing up for the job they are at a loss. One of the most successful stunts which I have ever seen is used by a very good friend of mine, who photographs every house in which he installs a furnace and also obtains a testimonial letter from every customer. He is never satisfied to leave a job until his customer is willing to write him out a good testimonial letter. These letters and photographs are mounted up in a loose leaf book, the letter on one side and the photo on the other half of the page. When it comes down to the point where this dealer begins telling of the various furnaces he has installed, in place of telling the prospect he installed a furnace for John Smith over in the Fourth Ward, he takes out his book, reads the various testimonial letters, points to the houses, and by and by he hears the prospect say, "I know that fellow, he is a second cousin of mine."

When I tell you that John Bos, our customer at Muskegon, Michigan, has a house, 34 feet square, in which he has a Premier furnace and that he wouldn't take a good deal of money for it, you simply take my word for it. How much weight my words carry depends entirely upon the amount of confidence you have in me, but when I show you a photograph of John Bos' house and show you a letter from him telling in detail the experience he has had, you nor any other man have no valid right to question

that sort of testimonials. What other people say and think of your product is of vital interest to you and is one of the oldest and most reputable forms of clinching a sale.

Everywhere you pick up a magazine you will see advertisements telling you "So and So says this;" we know that Mrs. Oliver Belmont of New York City uses Community Silver; we know that Charles Schwab shaves with a Gillette Safety Razor.

Why shouldn't you point with pride to every heating installation you have put in? And if they have been made correctly and are successful working jobs, every instal-



C. F. Anderson,  
Retiring Auxiliary President.

lation will be a recommendation for you.

Turn for a moment to the man who calls on you to sell you merchandise. How many men sell you a new line or product with which you are not familiar, without showing you letters from nearby dealers who have had the line and are satisfied with it? Isn't it a fact that regardless of what community you may be from, there is some store in that locality which is a leader, and salesman after salesman comes in to see you and tells you he has sold the "big store" in such and such a town? It carries weight, too, doesn't it? Isn't it logical to believe that the fundamental reasons back of the selling of wholesale merchandise are the same as those

for selling at retail? Why not take advantage, then, of every point in your favor?

Finally, it hinges on this: Selection of the line of furnaces which you are going to handle, your installation as a builder of permanent good will, of giving service to the customer, of establishing your reputation and of forming the most potent power for your advertising. It then becomes a problem of salesmanship, of *knowing not only your line, but the other fellow's*, of knowing how to tell the other fellow what you have to sell, of creating desire and of forming the right kind of an appeal to him.

Summing up, the clinch—showing him the dozens of other satisfied customers in your locality. And if these fundamental rules have been followed, there is no reason why you should not show a nice tidy profit at the end of the year.

E. L. Jaynes, President of the Northwestern Furnace and Supply Company, spoke on "Fan Blast Heating for Residences," as follows:

#### Fan Blast Heating.

In approaching the subject of Fan Blast Heating for residences, I am doing so realizing that there are perhaps those here who understand just as much about the subject as I do. As I see the proposition, it is a question of what is the best system of heating for a medium or large size home. It means the deciding of the question that naturally arises in the mind of one who contemplates building a home, as to just what system of heating he shall employ.

During the past fifteen years my experience has been limited to rather a restricted field. We have done heating and ventilating in a territory confined to Minnesota, Northern Iowa, Wisconsin, and the Dakotas. All that territory has severe conditions to contend with during the winter months, and in that we differ from other localities in that a heating plant to be efficient, economical, and durable, must be properly engineered.

I never sold or engineered but one real heating system in my entire experience. More than three years ago, I sold a Warm Air Heating Plant to heat a building, 169 feet by 656 feet, with an average height of 30 feet. I contracted to heat the building to forty degrees temperature when thirty below zero outside. We installed a Fan System with warm air furnaces, and the plant has been so good that the owners have never purchased a pound of coal or a cord of wood or a gallon of oil, with which to heat the building. In other words, the plant has taken care of the building with absolutely no expense for fuel. That's what I call a real Heating Plant.

In talking to you today, I am going to keep away from technicalities. I am going to analyze the needs of the home owner, and I am going to tell you why I think a Warm Air Furnace, backed up by a good fan system of installation is the best heating system for residences known to the trade today.

Let us consider for a moment going out into a meadow on a bright morning in May or June when there is very little wind blowing with a temperature of about 65 degrees and a relative humidity of about 75 per cent. Let us take a sample of the air and see what we would find. We are proposing this June morning air in the open country because we believe you will agree that that condition of atmosphere would be ideal and you will further agree with us that if you could produce artificially in your home in the winter time that same measure of purity—that same measure of relative humidity—the same degree of comfort that you would expect to find in that meadow on such a morning, you would be perfectly satisfied and you would feel that you had the ideal heating system. You would also feel, perhaps, that the health of your family would be maintained as far as air and humidity could be expected to contribute healthful conditions under any circumstances.

You would not expect to find

very much dust or dirt in the air, nor would you expect to find any odors that would be objectionable.

#### Lack of Relative Humidity.

One of the greatest defects in the average heating system of today—and by heating systems I am referring to steam, hot water and gravity warm air systems—is the lack of relative humidity, and in order that you may understand what I mean by relative humidity let me explain to you the various terms used. I presume there are those here who understand this subject as well as I do, but there may be some who do not, and I want to make myself clear to all of you.



Edson Perry,  
President Auxiliary.

Not many years ago our schools taught that air was composed of about 79.1 per cent nitrogen and about 20.9 per cent oxygen. There is, however, another factor that is being considered today as much as these other two elements, and that is water vapor. Water vapor is not discernible except under certain conditions. It is like steam in a boiler, perfectly transparent. When the valve of the steam boiler is opened, however, and the steam released into the open atmosphere it immediately turns white like a cloud and is absorbed by the air quickly. While it disappears from view, it is nevertheless in the air in the form of water vapor. When air at zero is fully saturated it will contain .48 of one grain per cubic foot. Now, when you warm that

same cubic foot of air to only 70 degrees it takes sixteen times as much water vapor to saturate it fully.

Relative humidity means that amount of moisture or water vapor we find in a cubic foot of air as compared with what that cubic foot of air could hold if fully saturated at any given temperature. Those who have experimented with various percentages of relative humidity in the heating of residences, have found that the degree of comfort experienced in that home depends almost entirely on the percentage of relative humidity—for instance, if the percentage of relative humidity is small, the temperature must be higher, or by introducing a larger percentage of humidity the degree of temperature may be lowered and the home be just as comfortable.

Now, the reason for discomfort where the relative humidity is low, is that the air being dry is constantly absorbing every particle of moisture it can find as rapidly as possible. It stands to reason then that the moisture thrown off by your body is being evaporated or absorbed by dry air faster than it would be if the air was artificially filled to, say, 60 per cent of what it could possibly hold, by some sort of a humidifier in connection with your heating plant. It is this evaporation that causes a cooling sensation or a chilling sensation no matter what the temperature might be. Until I made a study of this subject I couldn't understand why I was comfortable in the summer time at a temperature of 65 degrees with the lightest weight clothing on that I could purchase, while in the winter months I would be chilly at 70 degrees with heavier clothing.

As far as I know there are no humidifiers in the market which are adaptable to either steam or water heating systems that will produce a sufficient degree of relative humidity. That being the case, it is forcing the best engineers to the conclusion that there is but one type of heating plant that is capable of producing the ideal conditions I



have just mentioned. It is possible, because I have succeeded within the past two years in heating a few of the best residences built in Minnesota and Wisconsin and have come nearer to producing summer weather in those homes in winter time, than has ever been produced with a steam or water system. I am showing you here a photograph of a residence built at Lake Minnetonka which is just outside of Minneapolis and in which the relative humidity test has shown satisfactory results. I am also showing you a photograph of another large residence, also a fan blast system of warm air heating, where our tests have proven out satisfactory.

#### Warm Air Heating Best.

There is another reason why I feel that a Warm Air System of Heating is better than any other system known, for the average or large size residence. It is quite generally admitted that, in this territory at least, the most of us are compelled to burn soft coal and, as soft coal has a very large percentage of its heat in the volatile matters, that the proper combustion of this fuel is a matter that deserves considerable attention. In a hot water boiler working under natural draft conditions a large amount of carbon or soot forms in the boiler and a large amount of black smoke passes from the chimney, which is nothing more or less than fuel waste. It is practically impossible to produce a complete combustion of this fuel in a combustion chamber the temperature of which is held down to a point around 140 degrees by the circulation of the water in the heating system. It has been demonstrated, and I think you will all agree with me that a better combustion of fuel may be produced under higher degrees of temperature. We are forced to the conclusion then that from a fuel economy standpoint more heat units may be produced in a good first class Warm Air Furnace and from a given amount of fuel than can be produced from the same fuel in a hot water boiler.

This leads us up to the considera-

tion of the Fan Blast Warm Air Heating system for medium or large sized residences.

#### Objection to Large Pipes in Basement.

The great big objection we have had to overcome in the past has been the impossibility of heating all the rooms in a large residence to the same temperature, regardless of weather conditions. Strenuous objections are made to the amount of space required in the basement for the large warm air and cold air pipes. I am referring now particularly to the gravity systems. It has



C. S. Moss,  
Vice-president Auxiliary.

been contended that if you built the warm air pipes large enough to carry a sufficient quantity of air to the individual rooms it takes up too much of the basement space, and we will agree that the objection is well taken.

When you look the question of heating residences fairly in the face it is little more than a question of air engineering, a problem of proper distribution of the required amount of air to each individual room, and that can be better done with a forced circulation than with gravity. It also eliminates the objectionable large round pipes in the basement. In a gravity system it is hard to produce a positive velocity of air travel in the pipes, under any and all circumstances, and there is one of two things that must be delivered:

Either you must deliver a positive amount of moderately heated

air, or a smaller amount of air at higher temperature. Your heat losses must be overcome. That is one factor that cannot be eliminated. The proper insulation of a house is important. By putting on storm windows and doors it is possible to prevent a large amount of heat loss, but build your house as tight as possible, and you still have a heat loss to overcome.

#### Rapid Flow of Circulation Evens Temperature.

If you are using a gravity system of any nature your temperature at the ceiling line is much higher than at the floor line, due entirely to a slow circulation of the air. The only satisfactory method of reducing the difference in temperature between the ceiling and floor is by a more rapid circulation of air within the home. As the amount of heat loss depends entirely upon the difference in temperature of air within the house and without, one can readily see that the higher the temperature of the air at the ceiling line the more heat will pass right up through the ceiling into the attic, and from there outdoors. Also take the first two feet below the ceiling, if there is an excessive temperature at that point there will be an excessive heat loss through the walls and windows, and inasmuch as you are not interested in heating more than the first six feet above the floor, then the lower you can keep the temperature of the air from that point to the ceiling, the less your heat losses will be, and the more economical the operation of your plant.

#### Casings Must Be Smaller When Fans Are Used.

We have found, therefore, that by putting a Fan on a Warm Air Furnace and circulating the air within the home fast enough to change it every six or eight minutes, we can produce a more even temperature, more satisfactory living conditions, and more comfort, than any other system of heating we have ever had any experience with. In considering a Fan System one must of course be careful about the type of furnace to be used. The



modern furnace of today is built particularly for a re-circulation of the air on a gravity basis. There has been in recent years a very marked trend towards enlarging our casing diameters on all Furnaces. In a Fan System one should use either a close cased furnace, or house the castings inside the casing in such a manner as to make the air driven by the Fan rub against the castings in its passage through. If you use a furnace designed for gravity heating the air passages are so large that one is apt to blow cold air into a portion of the house and warm air into another portion.

Time will not permit me to go into much detail in that direction. There are two types of Fans that may be used, one known as a Booster fan, the idea being to run it a little while in the morning and at such times as are necessary to maintain a given temperature, and then stop it a portion of the time. It is clear that this type of fan should not obstruct the flow of air in the cold air returns, and we have had splendid success with a Fan made by the American Blower Company, Detroit, Michigan. We have two jobs installed in large houses where the Fan is run constantly and the fan used is known as the Buffalo Forge or American Sirocco, and it has been possible to keep the temperature of these houses at 70 degrees constantly without difficulty, regardless of winds, and with a minimum amount of fuel.

One of the objections that has been made to the Fan Systems in the past has been the item of cost of operation. To the average mind it is easy to see that it will take a given amount of fuel to heat a house, and whatever the cost for current to operate the motor would be just that much additional expense. That is not the case. Much forcing of gravity systems is necessary to keep certain portions of the house warm. It is quite common to find certain rooms in a home overheated in order to carry other rooms up to a satisfactory temperature. A Booster Fan on a Furnace

of that kind working under these conditions would eliminate or save that fuel waste, because it would force an even distribution of air and heat throughout the house at all times. It would also eliminate the excessive heat loss on account of slow circulation—also the excessive heat loss in the basement, and the cost for current to operate a fan that will handle 2,000 cubic feet of air per minute is about two-thirds of a cent an hour.

At the afternoon session, reports of Secretary Pauley and various committees were presented.

#### Secretary Pauley's Report.

Since our second annual convention held at Waterloo on March 29 and 30, 1922, our Association has made considerable progress. Following this convention several new members were enrolled. A little later four additional members were added from Sioux City, and during the year several others have been received. Several business changes have lost us some members and others have been dropped for non-payment of dues, yet we show a slight increase in membership for the year.

However, we should not be content to practically stand still in the matter of membership, and some extra effort should be put forth in the coming year to increase our membership. We do not have a single member from the cities of Clinton, Burlington, Davenport, Muscatine, Ottumwa and Council Bluffs. Davenport has a large local association, but they have not as yet affiliated with our State Association. The city of Des Moines, which should furnish our largest membership, has no local association and only four members in the State Association.

Would recommend that the matter of increasing our membership be turned over to a good live committee, the members of which are not afraid to work, and that some funds from our treasury be set aside for their use if necessary. They should, of course, work in conjunction with the members of the Auxiliary, who should be, and many of

whom are, the salesmen for our Association.

On July 15 and 16 the Association held its first annual outing at Mason City and Clear Lake. President Lichty sponsored this outing and stated from the beginning that if we could get 25 people to attend he was in favor of holding it. There were nearly three times that many present and several more would have been there if the early morning showers on Saturday had not prevented. The outing or picnic did more toward getting the members acquainted with each other than a convention can possibly do. All formality was thrown aside and a good time was enjoyed by all present. This should become an annual affair, and this convention before adjourning should fix the place for the second annual outing.

During the early part of the year we started issuing a monthly bulletin which was mailed to all members and also members of the Auxiliary. This bulletin was at first printed on a multigraph, but on December 1 we issued our first printed bulletin, known as *The Iowa Sheet*, which is mailed to all sheet metal contractors in the state, regardless of whether they belong to the Association, and also to members of the Auxiliary.

The issuing of this bulletin is made possible by the support of our friends of the Auxiliary who are manufacturers and jobbers. With one or two exceptions, they have taken space whenever it is offered to them, and we have had some of them on our waiting list awaiting the opportunity. Before issuing the first copy six dummies were sent out to as many manufacturers and jobbers, giving them the opportunity to take some space, and only one of the six refused, the other five sending back an order. That is the kind of cooperation we get from the manufacturer and jobber. Only one other State Association issues a bulletin and their Secretary advises that he hoped when he started it he could secure enough advertisements to cover the cost of issuing, but up to date he has been unable to do so.

Our bulletin can be made much more interesting and of greater value to the Association with the help of the members. Have tried to print the news concerning the activities of the different local associations, but have been unable to get the local secretaries to furnish any information, with the exception of the Waterloo Local, whose Secretary is our worthy President. The columns of the bulletin have been thrown open to any and all members to express their views on any subject pertaining to the sheet metal trade, but there has been no response.

During the coming year the Association should take up some definite lines of activity. Several problems confront the sheet metal contractor today. One is the substitution of other material where sheet metal should be used. A publicity campaign should be carefully planned and executed. The public should be taught the many uses of sheet metal and should be instructed as to where its use is advantageous. Much publicity is now being given to certain kinds of sheet metal and sheet metal products by the manufacturers. We should link up our advertising with theirs and thus share with them the benefits to be secured therefrom.

This matter of publicity should be discussed by our convention and if agreeable, some plan should be worked out and presented to our Association.

Another most important matter at the present time is the apprenticeship question. Unless new mechanics are trained the trade will soon be without them, and our business cannot be enlarged and increased without using more mechanics.

Not only should the city shops train mechanics, but every shop in the state employing one or ten men should have at least one apprentice in training. Investigation should be made as to the best methods of carrying on this important work and recommendations at as early a date as possible in the future to the membership, and then a systematic cam-

paign put on to enlist the help of every member and every sheet metal contractor in the state.

In conclusion let me say that it has been a pleasure to serve the Association as its Secretary the last two years. I have formed friendships that I value highly. The officers and directors, with possibly one exception, have acted whenever called upon. Our President has done his share of the work at all times, and it has been a pleasure to work with him. President Anderson and the other officers of the Auxiliary have never failed to respond when there was work to be done, and the Auxiliary has been a great help to our Association.

The election of officers resulted as follows:

President—N. A. Lichty, Waterloo, re-elected.

Vice-president—Nason Friend, Sioux City.

Secretary—R. E. Pauley, Mason City, re-elected.

Treasurer—O. W. Ilten, Cedar Rapids.

Directors—R. L. Spellerberg, Dubuque; J. E. Johnson, Sioux City, and R. E. Bockert, Fort Dodge.

It was decided that arrangements were to be made for an outing for the members, the Auxiliary, with their families and friends, some time during the summer.

The following resolutions were passed:

That President be an ex-officio member of the Board of Directors and the Retiring President automatically become a Director, so as to increase the Board from three to five members.

Thanks to members of Sioux City Local; E. I. Dodd; the Auxiliary; speakers; hotel management; the ladies and all others for cooperation in making the convention a success.

Special vote of thanks to Miss Etta Cohn, Manager of AMERICAN ARTISAN, for her loyalty in attending the convention each year, and appreciation of the fact that AMERICAN ARTISAN was the only trade journal represented.

And to J. H. Hussie of Omaha for his loyalty and for the smiling happiness he brings with him.

The ladies of the Sioux City contractors certainly made things pleasant for the visiting ladies, having arranged a fine luncheon and a matinee party, and (quite worthy of note, this) they saw to it that suitable provisions were made in the program for Wednesday evening's entertainment to make it an enjoyable occasion for them.

The committee consisted of Mesdames L. M. Cahill, S. E. McLaughlin, William Groh and E. I. Dodd.

### *Iowa Sheet Metal Auxiliary Elects New Officers.*

The Iowa Auxiliary are a loyal bunch as was shown by the almost "100 per cent" attendance at the Iowa Sheet Metal Contractors' convention and the enthusiasm with which they cooperate with the Contractors.

Two spirited business sessions were held on March 14th and 15th, and plans laid for a vigorous membership campaign for the Auxiliary as well as the Contractors' Association.

Officers for 1923-1924 were elected as follows:

President—Edson Perry, Des Moines, Milwaukee Corrugating Company.

Vice-President—C. S. Moss, Des Moines, Peninsular Stove Company.

Secretary—H. L. Frey, Des Moines, Premier Warm Air Heater Company.

Treasurer—Louis Roos, Des Moines, Quick Furnace & Supply Company.

Sergeant-at-Arms—P. G. Patterson, Sioux City, Norfolk Furnace Company.

Directors—C. F. Anderson, Des Moines, U. S. Register Company; B. A. Quick, Des Moines, Quick Furnace & Supply Company; E. I. Dodd, Sioux City, Standard Furnace & Supply Company; Frank Wortley, Chicago, American Rolling Mill Company.



With a rising vote of thanks to retiring president C. F. Anderson and to E. I. Dodd for his work in arranging the banquet, etc., and to all others who assisted in making the convention a success, the meeting adjourned.

**All Illinois Sheet Metal Contractors Are Invited to Attend Decatur Convention April 4th and 5th.**

TO AMERICAN ARTISAN:

Just a word in regard to the 10th Annual Convention of Illinois Sheet Metal Contractors' Association at Decatur, Illinois, April 4 and 5, Orlando Hotel. All arrangements have been made. Please invite all sheet metal contractors in the State to attend.

Those wishing reservations may write Mr. Walter Dennis, 611 North Water Street, Decatur. We have reason to believe this will be the best yet held.

I am also enclosing list of the members of the Danville Association, which I organized on March 8, with the assistance of President Hermsdorfer and Jack Sauers of the Meyer Furnace Company.

Wishing you the best in all things, and hoping to see you at Decatur, I am

Yours very truly,

FRED C. GROSS,

Secretary.

Quincy, Illinois, March 12, 1923.

The officers and members of Danville (Illinois) Association, Sheet Metal Contractors, are as follows:

President—Henry Bireline, 121-123 Walnut street.

Vice-President—Edward Zillman, 804 East Main street.

Secretary—W. G. Dobbins, 10 Walnut street.

Treasurer—William F. Lahr, 1208 Franklin street.

Trustees—Fred Spangler, 118-120 Oakwood avenue; William Dritz, 407 East Main street, and Robert Kienest, 804 East Main street.

**Members.**

Thomas King, 104 West Main street.

William C. Dittman, 21 Tennessee avenue.

Henry Bireline & Company, 121-123 Walnut street.

W. G. Dobbins, 10 Walnut street.

William F. Lahr, 1208 Walnut street.

R. H. Balsley, 719 Vermilion street.

John W. Orr, 214 Logan avenue.

William H. Koons, 219-225 West Van Buren street.

Spangler Brothers, 118-120 Oakwood avenue.

William H. Dietz, 407 East Main street.

W. F. Goth.

W. L. Kimbal.

**What Makes Bottom of Tank Rust Out When Sides Show No Signs of Rust At All?**

TO AMERICAN ARTISAN:

We have recently had a peculiar experience with a galvanized iron, water storage tank and would like to have you publish the following in your columns to see if any of the readers have had a similar experience and can suggest a remedy:

About six months ago we lined a wooden storage tank for a farmer (tank being about 4 ft. wide, 6 ft. long and 4 ft. deep). The wooden tank is built of 2-in. cyprus material and is used for storage from a well to supply a house and stock water for barn. The tank is located on the second story of an outhouse, water being pumped in over top from a pump located on first floor of this building; pump being run by a gas engine, which furnishes power to a line shaft and from that to pump. The supply pipe is taken out of bottom of tank, run to and buried under ground, running to house and barn.

The tank has rusted out in the bottom; there is no sign of rust on upright sides at all. The tank is usually kept two-thirds full of water. Supply pipe from this tank furnishes water to a galvanized stock tank in barnyard, which owner claims is 10 or 12 years old and shows no indication of rust. The rust is not caused by defective sheets, as on either side of tank a portion of each sheet is on bottom and a portion on side.

There are no electric wires or lights about the premises.

We will be glad if any reader can suggest a cause and also a remedy.

Yours very truly,

J. A. SPANGLER.

For T. B. Shannon Company.  
Iola, Kansas, March 13, 1923.

**Gibb Instrument Company Opens Cleveland Sales Office.**

The Gibb Instrument Company of Bay City, Michigan, manufacturers of Electric Welding Equipment, have opened a sales office in Cleveland, Ohio, at 2104 East Superior Avenue, in charge of Mr. W. O. Little.

**Notes and Queries**

**Playground Equipment.**

From Charles Shore, Shannon, Illinois.

Please advise me where I may purchase playground equipment.

Ans.—Rolfe Iron Company, 36th and I. C. Tracks, Chicago, Illinois; Thomas E. Wilson and Company, 727 North Sangamon Street, Chicago, Illinois, and Health Merry-Go-Round Company, Quincy, Illinois.

**Tin Tubing.**

From C. M. Frantz, 326 Honeywell Avenue, Hoopeston, Illinois.

Can you tell us who manufactures tin tubing seamed on inside, sizes 3/16, 3/8, 1/2 and 5/8 inches in diameter?

Ans.—Eagle-Picher Lead Company, 208 South LaSalle Street, Chicago, Illinois.

**Rope Cutter.**

From Charles Shore, Shannon, Illinois.

Kindly let me know who makes rope cutters.

Ans.—Evan L. Reed Manufacturing Company, Sterling, Illinois, and Cutter Manufacturing Company, Everett Station, Boston, Massachusetts.

**"Leader" Hay Carrier.**

From A. F. Schemmer, Rock Valley, Iowa.

Who makes the "Leader" reversible hay carrier?

Ans.—Milwaukee Hay Tool Company, Milwaukee, Wisconsin.



# Events and Progress of the Hardware Trade.

What the Retailers, Jobbers and Manufacturers Are Doing.  
Latest Selling Methods and Experiences of Successful Men.

## *Only a Short Time Left to Send in Your Photos for Window Display Competition.*

April first is the last day when photographs of window displays will be accepted in AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition.

Below we republish the cash prizes offered for the best window designs. Creative window designers will recognize that the cash prizes are secondary, but to be recognized by AMERICAN ARTISAN'S board of award is, indeed, a *real honor*. Here are the rules:

The window display must be photographed, and the display may be made up of goods from any of the following lines: General hardware, machinists' supplies, builders' hardware, automobile supplies, sporting goods, fishing tackle, house furnishings and paints, cutlery, dairy supplies, stoves, ranges, warm air heaters, sheet metal or kindred lines.

The photograph, *together with description of how the window display was arranged and the materials used*, may be sent by mail or express, charges prepaid, and must reach this office *not later than April 1, 1923*.

Each photograph and description must be signed by a fictitious name or device and the same name or device must be placed within a sealed envelope containing the real name and address of the contestant, this sealed envelope to be enclosed with the photograph.

AMERICAN ARTISAN AND HARDWARE RECORD reserves the right to publish all photographs and descriptions submitted in the contest.

Four prizes, totaling \$100, are to be awarded for the entries adjudged the most meritorious. These are: First prize, \$50; second prize, \$25; third prize, \$15; and fourth prize, \$10.

## *Copper Kettles Hammered Out of American One Cent Pieces.*

A rare example of skill and patience (as well as of the ease with which copper is worked) has been brought to the attention of the Copper and Brass Research Association—a copper kettle hammered out of a Lincoln one-cent piece.

Two workmen in a New York sheet metal shop engaged recently in a unique contest. Each wagered that he could make a smaller copper kettle than the other, out of a one-cent piece. The results are shown, "life size," in the photographs

It was incorporated in 1902 with Robert Vom Cleff as President, and has offices at 105 Duane Street, New York City, and at 190 North State Street, Chicago.

Recently Mr. Vom Cleff decided to retire and sold his stock to Paul Lange and Erwin H. Funke, Treasurer and Secretary respectively, so that they now control the company.

Mr. Lange, who has been connected with the concern for 25 years, is the new President.

Mr. Funke, with 21 years to his credit, is Vice-President, and William Ewald, with a record of 15



These Kettles Were Hammered Out From One Cent Pieces.

above. Each kettle is in itself a work of art. One is a trifle smaller than the other, but this is compensated for by the fact that the spout of the larger one will allow the passage of water, while the smaller is solid metal. The smallest kettle is  $\frac{3}{4}$  of an inch over all, with the base  $\frac{1}{4}$  of an inch in diameter. One of the three kettles was auctioned off among some sheet metal workers and fetched \$25, a tribute on the part of people in a position to know the practical difficulties that had to be overcome.

## *Vom Cleff & Company Control Passes to Paul Lange and Erwin H. Funke.*

Fifty years ago the firm of Vom Cleff was organized to manufacture and import cutlery and surgical instruments as well as hardware specialties.

years, is Secretary and Treasurer.

The business will be continued along the same lines, and Mr. Funke will remain in charge of the Chicago offices.

## *The Customer Is Always Right; No Exception to This Rule.*

Experience shows that successful businesses are built up from satisfied customers. Is the customer always right? Yes, absolutely. This, at least, is the policy that has been adopted by merchants who hold their customers. It is a policy that costs but little, too, for usually the customer discovers her mistake if she is wrong and rights things. The alert merchant goes to the utmost extreme to hold the friendship of any customer who may have become dissatisfied as the result of either the quality of the product or the kind of service rendered.

# Suggestions and Plans for Window Displays.

Instructive Examples from Exhibits in AMERICAN ARTISAN  
AND HARDWARE RECORD Window Display Competition.

## *Handsome Easter Display of Housewares Draws Trade.*

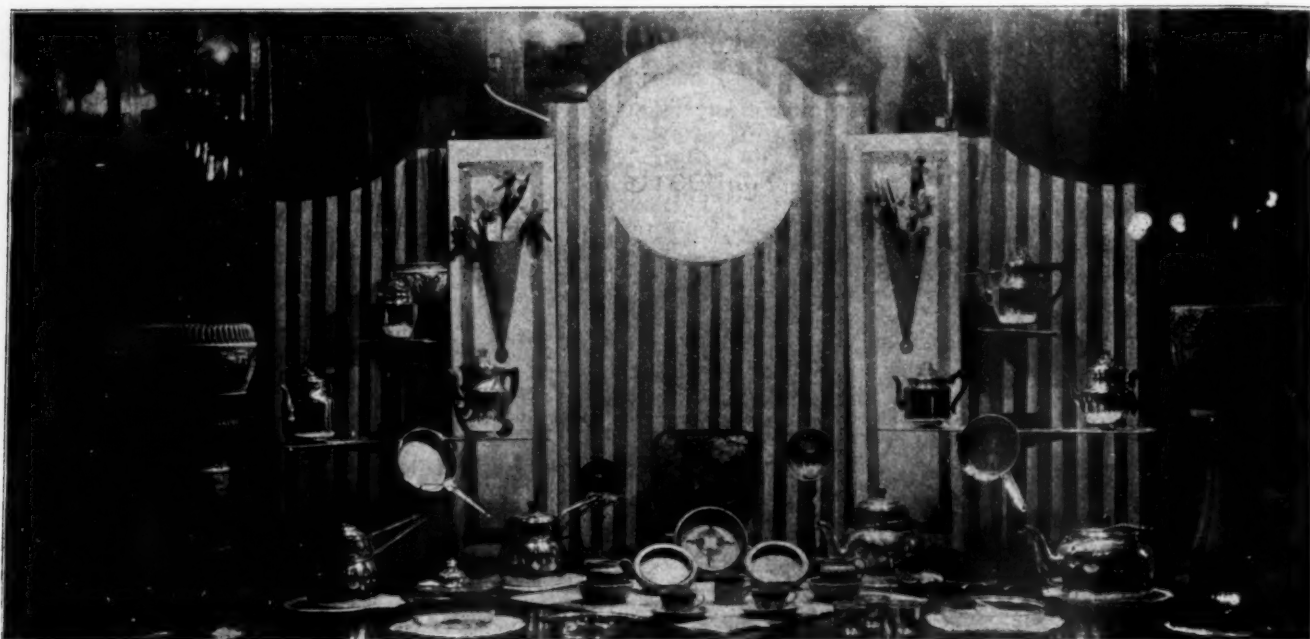
Brooklyn, New York, is said to be the city of baby carriages—which means that it is essentially a city of homes, and this again signifies that there must be a steady demand for the things that are used by folks who “keep house.”

So what could be more proper

“For the Easter display of house-furnishings, the background was covered with purple crepe paper and one-inch white strips put on to give the stripe effect. The columns either side of the center panel were covered with white with the one-inch border and the flower baskets in purple. There were yellow daffodils in the flower baskets. At the top of the center panel were the words,

## *Brevity, Truth and Personality Chief Rules for Advertiser.*

Discussing the question, “What is good advertising?” W. J. Hoyt, the progressive hardware merchant at Wellsville, New York, defined advertising as “the act of placing a thought or a thing in a way to attract the attention of others for the purpose of stimulating their desire



Window Display of Housewares, Arranged by Miss Edna L. Jenison for Peterson Brothers, Incorporated, Brooklyn, N. Y.

than a window display of housewares, or housefurnishing goods as we used to call them, and what could be more natural than that a woman should plan and execute such a window display, and that it should draw much business, at a time when people who keep house are “fixing up” both their apparel and their homes—Easter time?

The illustration herewith shows a very effective window display of this sort, arranged by Miss Edna L. Jenison for Peterson Brothers, Incorporated, 7905 and 7 Third Avenue, Brooklyn.

We shall let Miss Jenison describe this handsome window display, as follows:

‘Easter Greetings,’ lettered in gold on white.

“On the floor in the center was a mat 30” x 30”, made of alternating six-inch squares of purple and white floor blocks; and on these blocks was a display of children’s dishes, with rabbits, chicks and nursery rhyme designs. The rest of the window was devoted to aluminum and nickel ware, percolators, tea kettles, etc., pyrex, electric lamps and toaster, hanging baskets and jardinières and pedestals. White lace paper doilies were used under the percolators and other dishes, giving them a rich effect.”

Send in your photographs.

for possession.” A good ad, Mr. Hoyt said, should be short, truthful and reflect personality. Various ways of advertising open to the retail dealer were discussed by Mr. Hoyt. Among others he mentioned newspapers, show cards, window displays, circular letters and the service and treatment given customers. Mr. Hoyt said that he installed an information bureau at his store for the benefit of tourists, which, he said, had increased his sales materially, especially to autoists.

A thing can’t be wrong morally and be good business, no matter how sure the profits seem.



### ***Do You Know What Leaders in Your Trade Are Doing to Build More Business?***

Look at your store through the eyes of the buying public. How does it compare with other stores? What is it the leaders in the industry are doing that you are not doing? Superior selling methods these days are a big help to moving merchandise profitably. Take a little more time to "read up," study what is being featured through national advertising, and particularly what your own daily newspapers are portraying to the public. Study your trade publications as earnestly as you read the daily paper—and even more so.

Attend your organization meetings regularly because the very session you might miss would be the one where you could have procured an idea of priceless value. Keep abreast of the times. Take inventory of your business and its prospects. Do not hesitate to confer with your wholesaler and manufacturer. We are all interested in this one great industry, selling commodities which everybody buys and uses—the greatest business game in the world—giving people what they want!

### ***An "Out" Item Never Yields Any Profit in Bank Book.***

"Speaking of buying—no problem of such magnitude confronts the hardware dealer as this one. We must buy in order to sell, we must buy in quantities large enough, often enough and early enough, so no customer will find us saying 'We are out of that.' Lost sales are lost profits and lost profits are an injustice to ourselves and our communities."—*Ex-President Kelly, New York Retail Hardware Association.*

### ***Better Business Bureau Works to Prevent Fraudulent Labels.***

The campaign to check misrepresentation in sales of merchandise is gaining headway. It is now proposed to link up the movement with that to prevent the swindling

of the public through sales of worthless securities. For conducting the latter campaign the Better Business Bureau has been established with local organizations in thirty-eight principal cities. It is now proposed to enlarge the work of the bureaus by adding merchandise departments for the purpose of preventing fraudulent labeling and other unfair practices. A number of trade associations have already been doing some effective work along this line.

### **Coming Conventions**

Illinois Sheet Metal Contractors' Association, Decatur, Illinois, April 4 and 5, 1923. Fred Gross, Secretary, Quincy, Illinois.

National Warm Air Heating and Ventilating Association, Cleveland, Ohio, April 18 and 19, 1923. Allen W. Williams, Secretary, 52 West Gay Street, Columbus, Ohio.

American Hardware Manufacturers' Association, Spring Convention, Windsor Hotel, Jacksonville, Florida, April 24, 25, 26 and 27, 1923. Frederick D. Mitchell, Secretary - Treasurer, 1819 Broadway, New York City.

Southern Hardware Jobbers' Association, Windsor Hotel, Jacksonville, Florida, April 24, 25, 26 and 27, 1923. John Donnan, Secretary-Treasurer, Richmond, Virginia.

Old Guard Southern Hardware Salesmen's Association, Windsor Hotel, Jacksonville, Florida, April 25, 1923. R. P. Boyd, Secretary-Treasurer, R. F. D. 4, Knoxville, Tennessee.

Hardware Association of the Carolinas, Columbia, South Carolina, May 8, 9, 10 and 11, 1923. T. W. Dixon, Secretary-Treasurer, Charlotte, North Carolina.

Arkansas Retail Hardware Association, Marion Hotel, Little Rock, Arkansas, May, 1923. L. P. Biggs, Secretary, 815-816 Southern Trust Building, Little Rock, Arkansas.

Arkansas Retail Hardware Association, Marion Hotel, Little Rock, Arkansas, May, 1923. L. P. Biggs, Secretary, 815-816 Southern Trust Building, Little Rock, Arkansas.

Southeastern Retail Hardware and Implement Association, covering Tennessee, Alabama, Georgia and Florida, Auditorium Armory, Atlanta, Georgia, May 15, 16, 17 and 18, 1923. Walter Harlan, Secretary-Treasurer, 701 Grand Theater Building, Atlanta, Georgia.

National Retail Hardware Association, Richmond, Virginia, June, 1923. Herbert P. Sheets, Secretary-Treasurer, Argos, Indiana.

Missouri Sheet Metal Contractors' Association, Statler Hotel, St. Louis, Missouri, June 25, 1923. Otto E. Scheske, Secretary, 3818 Maffitt Avenue, St. Louis, Missouri.

The National Association of Sheet Metal Contractors, St. Louis, Missouri, June 25 to 29, 1923. E. B. Langenberg,

Secretary of St. Louis Convention Committee, 4057 Forest Park Boulevard, St. Louis, Missouri; E. L. Seabrook, 608 Chestnut Street, Philadelphia, Secretary.

Sheet Metal Contractors' Association of Pennsylvania, Hotel Allen, Allentown, Pennsylvania, July 26 and 27, 1923. W. F. Angermyer, Secretary, 714 Homewood Avenue, Pittsburgh, Pennsylvania.

### **Retail Hardware Doings**

#### **Arkansas.**

J. R. Roberts has opened a hardware store at Huntsville.

Allen J. Brasher has opened a hardware store at Dardanelle, under the firm name of Brasher-Haralson Hardware Company.

#### **Indiana.**

The Home Investment Company has purchased the hardware store of Mrs. Frances Neuenschwander at Vera Cruz.

#### **Iowa.**

A deal has been completed whereby Ben Roberts becomes half of the Cross Hardware Store at Monticello. The new firm name is Lazell and Roberts.

The Meredith Hardware Company of Des Moines has leased a store room at 721 Grand Avenue.

#### **Kansas.**

I. L. Croner has sold his hardware store at Wilsey to Bert Fay.

#### **Kentucky.**

The S. B. Luttrell hardware store at Knoxville has been sold to the Wright-Cruze Hardware Company.

#### **Michigan.**

A. Hines has purchased a hardware store at Rochester, where he will move the early part of April.

Fire destroyed the Leng Hardware building at Schoolcraft, causing a loss of \$10,000.

#### **Minnesota.**

At Maple Lake, William Elsenpeter has sold his interest in the firm of Elsenpeter Brothers to Henry H. Elsenpeter and Ott C. Moeller. The firm is now known as the Elsenpeter Hardware Company.

Deming Hardware Company has opened for business on Main Avenue, Sandstone.

James Hardware Company at Lake Crystal has been incorporated with a capital of \$25,000.

#### **North Dakota.**

Lomas Hardware Company at Bismarck has been sold to Sorenson Brothers and C. A. Vettel.

#### **Ohio.**

The Roberts Hardware Company of Cleveland has been incorporated with a capital of \$10,000. Incorporators are: A. M. Brooks, Dom. P. Mills, Paul S. Knight and F. W. Emslie.

E. W. Burket has sold his hardware business at Rawson to Harry Guin and Curtis Dennis.

#### **South Dakota.**

Floyd Smith has bought the hardware shop in Verdon.

#### **Wisconsin.**

Appleton Hardware Company at Appleton has been incorporated with a capital of \$15,000. Incorporators are: Frank N. Gabriel, Emil J. Belling and William J. Schultz.



# Study and Interpretation of Advertisements.

You Can Make Your Advertisements More Gainful by Avoiding the Faults and Profiting by the Good Qualities of Others.

Holder Hardware, Bloomington, Illinois, feature three items in their double column advertisement in the *Bulletin* of that city, which is shown herewith:

1. Windshield Glass.
2. Turner Master Line Torches.
3. Copper Clad Ranges.

Each one is featured in a different manner: At the top, the heavy display type calls attention to the first

That "script" line across the entire ad, reading, "When You Buy Your Range—Buy a Copper-Clad," sure does stand out, and if our supposition is right, this line goes into every advertisement of Holder's, so that the people of Bloomington are constantly reminded that the Copper-Clad malleable range is the range to buy.

Taking it altogether, this adver-

There are writers of advertisements who know how to arrange their cuts and text matter so that whether the advertisement is large or small it will stand out no matter what its surroundings. The accompanying illustration shows such an

Quality  
Means  
Satisfaction

## HOLDER HARDWARE

Everything in  
New and Season-  
able Hardware.

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### WINDSHIELD GLASS

For Sedan or Coupe, Doors, Windows and Windshields

**Just Bring In Your Frame**

We Also Sell and Set Window Glass



**Turner "Master Line"**  
**Blow Torch**

**Burn Gasoline, Kerosene**  
**Pistol Grip Handle**

Only one opening in tank. prevents leaks from soldered connections. Safety valve insured against explosion. Has parachute pump and separate adjusting needle. Sold with a guaranteed satisfaction or your money back.

**When a Better Torch is Made,  
We Will Sell It**

When you buy your range—Buy a Copper-Clad

A Little Better  
Quality, Save  
the Difference.

## HOLDER HARDWARE

A Little Less  
Price, Save the  
Difference.

item, and there follows an invitation to bring in the frame that needs re-fitting.

The blow torch is featured by an illustration and a detailed description which concludes with these words, "sold with a guaranteed satisfaction or your money back." One could not say much more, but in the next line we read, "When a better torch is made we will sell it."

tisement, while not particularly good looking, must be classed as a business puller.

\* \* \*

Keep out of the ruts. It is mighty easy to get into them, and easy traveling while there; but when once you try to get out you've got a hard job before you. Many a dead store should have cut upon its tombstone, "Smothered in a Rut."




**When You  
Need Glass**

**FOR THE HOME**

no matter what kind, shape or size, you can be sure of getting it at the Matheis Hardware Company.

As far as that goes, you can get anything in the hardware line at the Matheis Hardware—and get it at reasonable prices.

**TRY US**

*"Hardware Got Hand near"*

**MATHEIS  
HARDWARE CO.**

601 SOUTH 11TH STREET  
649 MAIN 649

advertisement. It was prepared for the Matheis Hardware Company, Springfield, Illinois, in the *Daily Journal* of that city, and occupied a space three columns wide by eight inches.

The border is a good one, combining as it does a picture of the store front with miniature illustrations of various tools and other articles sold in the store, and in the upper left hand corner, it will be noted, there is a picture of a sheet metal worker repairing a gutter, thus indicating that this kind of work is being done, too.

Evidently the telephone is being used by customers fairly frequently, judging by the two phones in the border and the prominence given to the number.

The text matter is short but carries a tone of confidence which is bound to impress the reader.

\* \* \*

It is better not to call attention at all to a competitor than to call attention even to his faults. Leave him alone.

# Review of Conditions in the Metal Markets.

## General Situation in the Steel Industry. Report of Prices and Tendencies in Sheet Metals, Pig Iron, etc.

### *Non-Ferrous Metal Market Continues Firm in Most Lines.*

Less activity has been evident in the non-ferrous metal markets the past week than in several weeks previously. Both in London and in American markets there has been a tendency among dealers to take profits. This has resulted in some slight price reaction, in copper and zinc prices, but the recession was so small as to demonstrate the real strength of the markets.

Tin continued to soar to new high levels since June, 1920. Lead has been firm, but St. Louis prices were marked a little lower by producers to maintain a more normal relation to New York prices.

Electrolytic copper previously bought for export was offered for resale in New York City by foreign interests, probably German, last week, with the result that some low quotations, f. a. s., New York, were made. It was reported that electrolytic sold at 16.50 cents, f. a. s., but the lowest probable quotation was 16.62½ cents. This cheap copper was quickly absorbed and the market soon became established at 17.00 cents, delivered, but demand continued to lag. The recovery was so sudden that confidence of outside holders of virgin metal and scrap was not greatly shaken and the general market was not much affected. Casting continued to hold 16.50 cents, refinery; lake, 17.12½ cents, delivered.

Chicago warehouses still maintain a base price of 24¾ cents on sheet copper.

### *Tin.*

Tin prices in New York City advanced 5 cents a pound from March 5 to March 12. The heavy American consumption, as reflected in the biggest deliveries for any successive three months in history, are the only known cause for the sharp rise

in world shortage. Visible stocks continue heavy and reductions from month to month have been small.

Chicago warehouses have advanced their prices two cents, the new quotations being: Pig tin, 56 cents; bar tin, 58 cents.

### *Lead*

Lead sold both for March and April shipment at 8.60 cents, New York, and at 8.35 cents, East St. Louis. Some good sized tonnages of Spanish lead have sold for importation here and the Spanish lead seller for the time being is out of the market. Demand continues heavy and the increase in production is only gradual.

There is no change in Chicago warehouse prices: American pig, 10 cents; bar, 11 cents; sheets, full coil, 11.85 cents; cut coils, 12.60 cents.

### *Solder.*

Chicago warehouse prices on solder are as follows: Warranted 50-50, \$33.00; Commercial 45-55, \$32.00, and Plumbers', \$29.50.

### *Zinc.*

Zinc sold up to 7.90 cents a week ago, then reacted to 7.75 cents, East St. Louis, for March shipment. This price represented a premium of ¼ cent over June shipment, due to the great scarcity of producers' stocks and the sold up condition of smelters for the next 50 to 60 days. Smelter stocks as of March 1 were only slightly in excess of 10,000 tons, the smallest in five years and equal to only about seven days' shipments at the February shipment rate.

Chicago warehouses quote zinc in slabs at 9 cents and sheet zinc, in cask lots, 16.65 cents; less than full casks, 11.15 cents.

### *Bolts and Nuts.*

Contracts for bolts and nuts for second quarter delivery are being

taken by Chicago producers to the extent they are sure of their raw material. Some difficulty is being experienced in obtaining delivery of steel bars for this purpose and some makers have sought to purchase bar iron as a substitute. Prices are holding at the schedule recently announced and present market conditions prevent shading. Most regular customers have made or are now negotiating contracts for their second quarter requirements and business for that delivery probably will be well covered shortly.

The leading rivet maker in Cleveland has followed the advance announced some time ago by Pittsburgh makers. Structural rivets are being quoted 3.25 cents and boiler rivets 3.35 cents, base Pittsburgh, which compares with prices of 3.00 cents and 3.10 cents respectively, formerly quoted. Small rivets are 65 off. Demand is fairly heavy.

### *Wire and Nails.*

Following the experience of the preceding week, specifications for wire and nails continue in smaller volume than for several weeks past. This is believed due to the fact most users have considerable tonnages on order and are awaiting shipment before seeking to place more business with mills. Demand for barbed wire is increasing as the season for its use approaches. Production of wire and nails is about 80 per cent of capacity. While the leading interest continues its quotations unchanged, some independent makers are quoting as high as 2.90 cents and even 3.00 cents, Pittsburgh. Some producers are out of the market at present.

Certain price inequalities still exist in the Pittsburgh district but fairly representative of the market are the levels of the Pittsburgh Steel Company and other independents here based on 2.65 cent plain wire



and 2.90 cent, base Pittsburgh, wire nails. The American Steel and Wire Company's prices below those levels are nominal and the Cambria Steel Company reports sales at 2.75 cents and 3.00 cents, respectively.

### **Tin Plate.**

Little new business is current in tin plate but specifications show no sign of diminishing. Some reservations of second quarter tonnage have been made for regular customers who have been delaying the sending in of specifications such as paint and varnish manufacturers, oil can fabricators, etc. The announcement made the middle of last week by the Wheeling Steel Corporation of a price of \$5.50 per base box, 100 pounds Pittsburgh, puts into effect the highest quotation reported in this district. Other independent producers' levels are \$5.10 and \$5.25. Operations continue to be on the basis of 85 per cent; the leading interest remaining on approximately the same basis as last week, 82 per cent of capacity, but is not open for orders for the third quarter and its prices are largely nominal.

### **Sheets.**

In the past few days several independents have advanced their prices to 3.85 cents for black and 5.00 cents for galvanized. Among these are the Wheeling Steel Corporation, Superior Steel Company and United Alloys Steel Corporation. The last named has advanced its prices on blue annealed to 3.25 cents. Outside prices seem to be 3.30 cents on blue annealed, 5.10 cents on galvanized and 5.50 cents on automobile sheets.

A difference between conditions now and at this date in 1920 is that mills are not sold up as far ahead on an average, and by the same token consumers are not covered as far ahead. This of course makes a more open situation. There is a great deal of buying to be done in the next three months, which may send prices up sharply on large tonnages, while on the other hand there is also a great deal of selling

to be done and this may tend to prevent prices advancing. It all depends on the balance between the two.

Production is about the same as in recent weeks, running in the neighborhood of 90 per cent of theoretical capacity.

## ***Pig Iron Situation Remains Firm With Chicago Asking \$31.00 For Number 2.***

***Free Iron Is Scarce and Inquiries Continue Active From All Sections.***

**S**TRENGTH is maintained in the Chicago pig iron market. All quotations now are \$31, furnace, lower prices having disappeared. Practically all first half production is covered by contracts and free iron is scarce. Much unsatisfied demand is seeking tonnage. Inquiry is active. Iron is moving to unusual sources since the Detroit stack is damaged, the valleys, Virginia and Chicago are selling into Michigan and Illinois, some valley iron is coming close to Chicago. A Michigan melter has taken 2,000 to 2,500 tons for the half through a Chicago broker, this being southern iron on a basis of \$27, Birmingham. Delivery from the South is difficult, especially by the water and rail route. Automobile builders are seeking added tonnage in this market. Superior charcoal has advanced to \$32, furnace, or \$35.15, delivered to Chicago. One maker is out of the market. Selling is fair and makers are well sold. No third quarter iron has been placed yet. Silveries are \$37.50 to \$38.50, Jackson county, for 8 per cent. Low phosphorus iron now is \$40, delivered, Chicago.

After the recent buying movement when the requirements of regular customers were taken on by pig iron producers in the Pittsburgh district to the extent of expected output, the market has an appearance of quietness. Here and there inquiries appear and occasional sales are closed in a quiet way which evidences some activity under this surface.

A price of \$26 for Number 2 foundry iron is quoted generally by southern furnace interests. In-

quiries and sales are numerous. The market is very strong. Steady selling is being done for the third quarter. While many orders still are being booked for the second quarter makers are more cautious. Higher prices are indicated and \$27 has been mentioned though no sales have been made as yet at that figure. Orders were received in the past week from Illinois, Indiana, Ohio, Michigan and other districts.

The Matthew Addy Company's Market Report follows:

There is a spring freshet in the iron trade—every branch of the business is booming. Pig iron in particular has had a great week, fully equalling the spectacular movement of steel a fortnight ago. January was a good month but February figures are much larger. The tonnage of iron sold has mounted up in an amazing way—and there has been nothing spotty about the market—New England, the East, the Middle West and the South all have had heavy buying movements. Many furnaces are sold up solidly for the first half of the year. Prices are responding to the wide and active market and are strong and advancing. There seems to be little doubt that iron during the next few weeks will reach a considerably higher price.

The strength of the iron trade rests on the general prosperity of the country and the unwillingness until lately of manufacturers and jobbers to buy ahead. No one has any reserves ahead. Everyone has been getting along by buying today what was needed tomorrow—and with the incoming tide of demand there were no supplies in stock to fill the country's wants. All the steel mills and all the foundries in the past six months have seen their business doubled. Today the production of iron in America is at the record peak and even with this the most distinguished authority in the country says "there will not be enough iron to go around." In January we produced 3,200,000 tons of pig iron which, if we can keep up the present rate—and this is doubtful—will mean a production this year of 38,000,000 tons—a staggering quantity. Yet it is certain that we need all of it to keep the railroads running decently and to supply the industrial needs of America.

It is pleasant to record the complete dispersion of the heavy clouds of gloom that a year ago hung so blackly over the iron trade.